INTEGRATED EPIDEMIOLOGIC PROFILE FOR HIV/AIDS PREVENTION AND CARE PLANNING

Bureau of Epidemiology and Disease Prevention Kansas Department of Health and Environment 2004



This AIDS Ribbon was designed by the Kansas Capital Area Chapter of the American Red Cross to raise hope and awareness.

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EXECUTIVE SUMMARY

At the end of 2003, a total of 1,471 persons were presumed to be living with HIV infection in Kansas; of these, 75.1% (1,105 persons) had progressed to AIDS. Currently, approximately 80% of all counties in Kansas have been affected by HIV/AIDS. Four of the 105 counties in Kansas contain more than 100 prevalent HIV/AIDS cases. From 2000 to 2003 the number of prevalent cases increased by 35.5% (1,086 to 1,471). Estimates indicate that there were between 900 and 1,300 persons living in Kansas who were still unaware of their infection status at the end of 2003.

Since 1996, AIDS-related mortality has declined sharply, coinciding with the emergence of highly active antiretroviral therapy (HAART). Although the number of deaths has not reached the 1996 high, in the most recent years there has been a slight increase in AIDS related deaths. This increase may reflect limited access to, or use of, health care services, and the limitations of current therapies among persons in care. The number of AIDS related deaths dropped to 33 in 2000 but from 2001-2003 the number has stabilized at around 50 deaths per year. Additionally, as the HIV/AIDS population ages an increase in the number of deaths is expected.

During the previous four years, despite a downward trend in the number of cases diagnosed among non-Hispanic Whites, there have been an increasing number of HIV cases diagnosed among non-Hispanic Blacks and Hispanics. While historically non-Hispanic Blacks in Kansas have been disproportionately affected by HIV/AIDS, the Hispanic population has recently emerged as another major population of concern. According to the 1990 and 2000 census figures, the Hispanic population in Kansas has more than doubled in the previous ten years and seems to be steadily growing. Despite small numbers of cases among Hispanics there seems to be a rising concern for this population and their risk for infection with HIV as the rate of newly diagnosed cases increases faster than the rate of any other racial/ethnic group in Kansas.

The proportion of newly diagnosed HIV/AIDS cases reported among women in Kansas has been somewhat inconsistent. From 2000 to 2003 the number of female cases diagnosed each year has increased 89.6% from 29 cases in 2000 to 55 cases in 2003, while the total number of cases has only increased 23.1% from 160 cases to 197 cases. However, due to the small number of cases among women the percent differences are more sensitive to small changes in actual numbers.

Men who have sex with men (MSM) continued to be the most predominant risk group among all prevalent HIV/AIDS cases in Kansas at the end of 2003. As in all other analyses there were more cases diagnosed among MSM than any other group regardless of race or ethnicity. Among non-Hispanic White males there has been a reduction in the number of cases in every risk category as the total number of new diagnoses among white males has decreased. All other analysis produces little to no change in the trends among racial and ethnic groups by gender over time.

Statewide during 2003, a total of 152 new cases of HIV infection were diagnosed, 116 (58.9%) new AIDS cases were diagnosed and reported and 81 (41.1%) HIV cases were diagnosed and reported. Among the 152 newly diagnosed cases of HIV infection in 2003, 45 (29.6%) were simultaneously diagnosed with HIV and AIDS. Historically the proportion of HIV infection cases converting to AIDS within one year of the HIV diagnosis has remained relatively stable. Of the persons who had a positive result from a confidential HIV test during 1998-2002 and were reported to the state's HIV/AIDS Surveillance Program, 43.8% had an AIDS diagnosis within 3 months of their first positive HIV result.

According to the HIV Testing Survey (HITS) most of the men interviewed had 3 or more sex partners (61.2%) during the 12 months prior to the survey. Of the men interviewed in HITS, 78.5% reported having had at least one casual (non-primary) sex partner during the previous 12 months (Figure 17). In addition, 44% of the men with at least one casual sex partner during the previous 12 months were unaware of the HIV status of their most recent partners (HITS). Among, MSM interviewees who reported having a casual sex partner, 87.2% reported having oral sex and 88.2% of those reported that the oral sex was unprotected.

Twenty-eight percent of female HITS respondents eligible for the heterosexual sex risk group reported having a casual sexual partner with whom they had oral sex the last time they had sex. Sixty three percent of those respondents reported that the oral sex was unprotected. Condom usage during sex (excluding oral) with casual partners is more consistent among MSMs than heterosexuals regardless of gender.

Determining the proportion of HIV/AIDS cases that know their HIV status and are not currently seeking primary medical care is a developing project in Kansas. The current data have significant limitations, however the analysis reveals an estimated 54.6% of those who were HIV positive and aware of their status did not seek care in 2003. These individuals were considered to have an unmet need for care. Non-Hispanic Blacks have the highest proportion (47.2%) of cases not in care in 2003 when compared to the other major racial/ethnic groups (non-Hispanic Whites: 46% and Hispanics: 42.5%).

The Ryan White Title II Statewide Needs Assessment was administered in 2002 as a follow-up to the original assessment in 1999 in an effort to continue to determine those services most needed and used by Ryan White clients. According to this survey, primary medical care, including physician visits and lab tests, were rated as the most needed service: 84% of the respondents reported a need for this type of care. Comparisons between the services respondents reported as a need and the services they reported using may indicate barriers to the use of these services. The largest discrepancy between the indicated need for a service and the indicated use of a service is among dental care where 80% of respondents indicated a need for this service and only 52% reported using this service. Additionally, 91% of the Needs Assessment Survey respondents reported taking medications for their HIV/AIDS.

If you have any questions, please contact Kevin Sykes in the HIV/STD Surveillance Program at (785) 296-5587 or ksykes1@kdhe.state.ks.us. Current HIV/AIDS surveillance statistics are maintained at: http://www.kdhe.state.ks.us/hiv-std/surveillance.html.



BACKGROUND

This epidemiologic profile provides detailed information about the current HIV/AIDS epidemic in Kansas. Specifically, this report describes the general population of Kansas, HIV-infected persons living in Kansas, and persons at risk for HIV infection. The profile is an essential resource for planning HIV/AIDS prevention and care activities throughout the state. The data presented in this report serve to guide prevention and service efforts, to justify and obtain funding for the implementation of prevention and service programs, and to evaluate programs and policies throughout Kansas. Multiple data sources were used to create a thorough and comprehensive document, which addresses 5 key questions:

- 1. What are the socio-demographic characteristics of the general population in Kansas?
- 2. What is the scope of the HIV/AIDS epidemic in Kansas?
- 3. What are the indicators of risk for HIV/AIDS infection in Kansas?
- **4.** What are the patterns of utilization of HIV services in persons in Kansas?
- **5.** What are the number and characteristics of persons who know they are HIV-positive, but who are not receiving primary medical care?

Each question noted above represents a section of the report, which includes relevant data and interpretation.

DATA SOURCES

The data in this profile are the product of a compilation of data from multiple sources used in an effort to provide the most complete and descriptive picture of the epidemic in Kansas. Although each source has strengths and limitations significant efforts have been made to present the data in the intended form and for the intended purpose. A brief description of each data source follows and includes brief limitations that should be considered when interpreting data from that source.

Core HIV/AIDS Surveillance

In 1983, the Kansas Department of Health and Environment (KDHE) began AIDS surveillance to track newly diagnosed AIDS cases. Newly initiated statutes from the Kansas legislature required confidential name-based HIV reporting beginning on July 1, 1999. Standardized case report forms issued by the Centers for Disease Control and Prevention (CDC) are used to collect sociodemographic information, mode of exposure, laboratory and clinical information, vital status (i.e. living or dead), and referrals for treatment services. All surveillance data are collected and maintained in the HIV/AIDS Reporting System (HARS).

Kansas HIV/AIDS Surveillance evaluations (based on comparisons of Kansas Medicaid databases and HARS) of HIV reporting completeness estimate that greater than 90% of all HIV cases diagnosed in Kansas have been reported to the surveillance program. Despite the high proportion of diagnosed cases reported to the surveillance program the

data may underestimate the number of recently infected individuals because some infected persons do not know they are infected or have not sought testing. The body's natural response to a new HIV infection can be overlooked or attributed to other common illnesses and therefore unlike most serious diseases it may not elicit a hospital or doctor's office visit. Consequently, HIV infection data do not accurately represent persons who have recently been infected, but rather persons who have received a test regardless of the position in the history of the disease. Efforts to identify newly infected individuals by highly specialized testing are being piloted in some high morbidity areas, but at this time no studies are in progress in Kansas.

Limitations: The HIV/AIDS surveillance system is naturally reliant on positive test results and the fulfillment of reporting requirements by providers.

Ryan White CARE Act Data

The Title II CARE Program in the State of Kansas has been assisting Kansans living with HIV and AIDS through a variety of resources since before the enactment of the Federal CARE Act in 1990. These resources included private donations, community-based organizations throughout the state and federal funding for the initiation of a statewide AIDS Drug Assistance Program (ADAP) in 1987.

Since 1987, the State of Kansas has benefited in accessing a variety of federally-funded resources, such as: Ryan White Title I, Title II, Title III, Social Rehabilitation Services (SRS) through Medicaid, and the Housing Opportunities for Persons With AIDS (HOPWA) Program. The Title II CARE Program, which includes funding for the statewide ADAP, has continued to received federal and state funding for assistance with:

- AIDS drugs, through the statewide ADAP
- Case Management, which includes transportation
- Primary Medical Care services
- Dental Care services
- Mental Health and Substance Abuse (MH/SA) services
- Home Healthcare services.

Additionally, other Ryan White Title Programs, SRS and HOPWA receive federal and state funding for additional care and supportive services.

In Kansas these services are monitored and administered using multiple sources. The Ryan White Title II database is maintained in the central office in Topeka and contains demographic, diagnostic, financial eligibility, and vital information. Additionally, the Topeka office monitors claim status and case management information. The recent development of a revised medical eligibility form for the Ryan White II CARE program has played a vital role in the surveillance and identification of HIV/AIDS in Kansas.

Seven contracted case management sites located throughout Kansas also maintain data systems that have additional client case plan and resource determination criteria that enable sites to maximize resources. Kansas ADAP utilization data is available through cooperative efforts with the Kansas Social and Rehabilitative Services (SRS). Prevention Case Management and the "Prevention With Positives" Programs utilize agency-based systems to evaluate activities and service utilization by those enrolled or not enrolled in

Ryan White Care Services. Additionally, a system, known as the "evaluation web", tracks other prevention-related activities administered through the contracted sites.

Limitations: All non-SRS databases are reliant on client reporting and case management reporting, which may result in time delays. These data cannot be generalized to all HIV-infected persons living in the state because it collects data only on persons who know their HIV serostatus, are not eligible for health coverage through private insurance, are currently being provided care and treatment services through Ryan White Title II-funded providers, and are financially eligible to receive services.

STD Surveillance

The KDHE HIV/STD Section is responsible for statewide surveillance of reportable STD infections and analyzing trends of infection. Kansas state statutes require reporting of positive tests indicating infection due to chancroid, chlamydia, gonorrhea, and syphilis to KDHE. The Kansas Infertility Prevention Project (KIPP) within the HIV/STD section funds gonorrhea and chlamydia testing for at risk women as defined by a set of criteria developed by the state KIPP coordinator and HIV/STD staff at KDHE. Testing is available at 117 sites throughout Kansas; approximately 30% of chlamydia and gonorrhea cases diagnosed in Kansas are diagnosed at these sites. Additionally, disease intervention specialists at KDHE provide partner counseling and referral services (PCRS). STD surveillance data can serve as a surrogate marker for unsafe sexual practices and demonstrate the prevalence of changes in specific behavior. In addition, gonorrhea, chlamydia, and syphilis can facilitate the transmission of HIV infection. Limitations: The reported infections from the KIPP in addition to the existence of asymptomatic men who are consequently untreated may falsely portray a disproportionate effect on women. KIPP testing criteria require that all patients tested be females under the age of 25 unless they are symptomatic or a direct contact to a known positive case.

HIV Testing Survey

The purpose of the HITS 2001 investigation was to collect detailed information from a cross-section of Kansans about their attitudes and behavior toward HIV testing. HITS 2000 data are designed to assess the representativeness of the HIV surveillance data, analyze HIV testing patterns, discover what types of HIV tests are used and to determine whether or not the reporting method influences a person's decision to test for HIV or not. In addition, specific information is collected about individual sex practices, alcohol use, drug use, and number and type of sexual partners. Respondents were selected from a variety of groups thought to be most at-risk for HIV infection given recent profiles. The HITS 2001 instrument was piloted from May 2000 to June 2000. Actual data collection ran for a period of eight months (July 2000 to February 2001). Particular attention was paid to venues for data collection. Prior studies had revealed that where one collected the data became a critical factor in gathering representative information about those found to be most at-risk for HIV.

In total, 306 useable HITS 2001 questionnaires were collected during the data collection period. The study population is derived from three groups thought to be at high risk for HIV infection. These groups include: Men who have Sex with Men (MSM); Injection

Drug Users (IDU); and high-risk heterosexuals (HET)--defined for the purpose of this investigation--as those individuals who are seeking treatment for a possible sexually transmitted disease. The unique social position of some of the study's sub-populations required that data be collected from locations where it would be possible to find people who fit the study's criteria. In the cases of HITS 2001 this meant gathering data from three distinct venues. The selected venues were: gay bars (for MSM), street locations (for IDU), and STD clinics (for heterosexuals). Within each venue a number of sites were chosen. Only those individuals meeting the criteria for selection are chosen while collecting data at these sites.

Limitations: Due to the age of this study some data may not be representative of current behavioral or belief patterns. Due to sample size and sample selection this data is limited in its generalizability. While the choice of venues provides an opportunity to find members of this risk group with some ease it also excludes some members of these risk groups that do not appear at such venues and therefore is a selection bias.

Behavioral Risk Factor Surveillance System (BRFSS)

The BRFSS is a state-based random-digit-dialed telephone survey of adults that monitors state-level prevalence of the major behavioral risks associated with premature morbidity and mortality. Respondents to the BRFSS questionnaire are asked about their personal health behaviors and health experiences. Kansas began with the BRFSS survey in 1990 and has participated in the national survey annually since 1992. Beginning in 1992 core questions generated by the CDC concerning AIDS and more recently AIDS, HIV, and STDs have annually been a part of the survey in Kansas. These questions range in scope from attitudes toward infected individuals to an individual's reason for receiving an HIV test in the last 12 months.

Limitations: Because this survey is administered over the telephone, persons without telephones or with cell phones only cannot be reached. Since phone ownership is highly correlated to income, persons without a phone are more likely to have low incomes when compared to persons with a telephone. This survey is administered among non-institutionalized adults and therefore excludes persons in hospitals, nursing homes, and military bases. All results from the BRFSS are self-report and subject to recall bias. For certain behaviors, the prevalence may be underestimated.

Vital Statistics Data

KDHE collects information on all births and deaths in Kansas. The birth certificate form includes demographic information on the newborn infant and the parents as well as information about prenatal care, maternal medical history, mode of delivery, events of labor, and abnormal conditions of the infant. Death certificates include demographics, underlying cause of death, and factors contributing to the death. The data are used in combination with the Social Security Death Index to track deaths due to HIV/AIDS and vital status of Kansas HIV/AIDS cases for the purpose of monitoring the effect of deaths related to HIV/AIDS.

Limitations: The HIV/AIDS surveillance office does not receive death reports for individuals who may be HIV infected, but do not have HIV or AIDS listed as an immediate cause of death or an underlying cause of death. The completeness of birth

certificates is additionally dependent on the diligence of the reporting entity. The effect of these limitations is possible under-reporting.

Population Data

U.S. Bureau of the Census (Census Bureau)

The Census Bureau collects and provides timely information about the people and economy of the United States. The Census Bureau's Web site (http://www.census.gov) includes data on demographic characteristics (e.g., age, race, Hispanic ethnicity, sex) of the population, family structure, educational attainment, income level, housing status, and the proportion of persons who live at or below the poverty level. Summaries of the most requested information for states and counties are provided, as well as analytical reports on population changes, age, race, family structure, and apportionment. State- and countyspecific data are easily accessible, and links to other web sites with census information are included. For the purpose of this report population statistics are based on the estimates generated for 2003 by the Census Bureau as published on September 30, 2004. **Limitations:** These data are generated from federal statistics and are reliant on the accuracy and participation of citizens throughout the country. Population estimates for this profile may not match other Census Bureau publications exactly due to rounding of stratifications specific to counties and regions in Kansas. Population based data are collected every ten years and intermediate data are estimates generated by trend analysis and fluctuate annually.

Kansas State Data

Economic and demographic data specific to the population of Kansas are generated from two additional sources to add local perspective. *The Governor's Economic and Demographic Report* summarizes the State of the Kansas's economy, as well as the nation's economy each year in January. It is published as a supplemental publication to *The Governor's Budget Report**. In addition, the Office of Local and Rural Health in KDHE brings together multiple sources to publish county health profiles for each county in Kansas to describe local health and population trends.

*http://da.state.ks.us/budget/publications/FY%202005/FY2005_Economic_Demographic_Report.pdf

Limitations: Local level population data has many of the same limitations as federal population data. Estimates are not specific counts and therefore are more susceptible to unforseen changes in the population. Despite the local component to these analyses most pieces in some way reference federal level analyses and are therefore reliant on the accuracy of accompanying estimates.

CORRECTLY INTERPRETING THE INTEGRATED EPIDEMIOLOGIC PROFILE FOR HIV/AIDS PREVENTION AND CARE PLANNING

New guidelines have been developed by the Centers for Disease Control and Prevention (CDC) and the Health Resources Services Administration (HRSA) to assist states with the creation of HIV/AIDS epidemiologic profiles. The purpose of the newly designed integrated profile is to create a more standardized and useful profile. The intention is to provide the HIV/AIDS Community Planning Groups (CPG), Ryan White Consortia groups, and HIV Prevention and Care Staff with a tool to guide the development of interventions/programs and the allocation of resources. This profile should also help to reduce duplication of efforts to distribute data, as well as, promote consistency and comparability of data. Due to the development of these guidelines comparisons to previous Epidemiologic Profiles will be somewhat challenging, but this profile will discuss and illuminate important changes in the epidemic trends that should reduce the need for retrospective comparisons.

New Developments of Note and Important Guidelines for Interpreting Data

Historically data for the HIV/AIDS epidemiologic profile have been presented in two ways: by year of report and year of diagnosis. For the purpose of this report data is presented by year of diagnosis and contains only those cases diagnosed with either HIV or AIDS prior to January 1, 2004. In order to minimize reporting delays the data used for this report is from the third quarter of 2004, which was completed on October 1, 2004. For all cases of HIV or AIDS reported in Kansas since the institution of HIV name-based reporting on July 1, 1999, approximately 80% of HIV and AIDS cases are reported within nine months of diagnosis. Assuming that this trend will continue around 20% of cases actually diagnosed in 2003 will be reported after October 1, 2004 and therefore not included in this profile. However, there have not been any adjustments made for this reporting delay in the current profile and therefore the number of cases in the most recent year represents a minimum estimate.

Rates for this profile are calculated for the 12-month period per 100,000 persons. For these rates population estimates derived by the census bureau for 2003 were used as the denominator. The numerator is the number of reported cases that were diagnosed during the 12-month period. In some sections 12-month data are combined into multi-year increments to improve the stability of data for trend analysis; in these cases rates will have a denominator based on the average population for that time period.

The Bureau of the Census, in compliance with the Office of Management and Budget Directive 15 (OMB 15), expanded race/ethnicity reporting in 2000. The expanded questionnaire allowed respondents to select one or more races to indicate their racial identity. The race/ethnicity data obtained from the Bureau of the Census were combined into five categories for comparison to HIV/AIDS data: white, not Hispanic; black, not Hispanic; Hispanic; American Indian; and Asian. For analyses involving small numbers

of cases in some racial/ethnic groups, those cases have been grouped in a category called "other".

In order to fully understand the epidemiology of HIV disease in Kansas as described in the Epidemiologic Profile it is essential to understand the definitions of certain terms. Human Immunodeficiency Virus (HIV) disease is used to describe the disease status of a person from the time of infection with HIV until death. Further sub-classifications of individuals infected with HIV are based on CDC established surveillance case definitions. For the purpose of this report and CDC funded surveillance as presented in MMWR (December 10, 1999 / 48(RR13); 29-31) individuals greater than 18 months of age diagnosed with HIV must have had at least one confirmed positive test (antibody or antigen), a detectable quantity of virus or viral nucleic acid isolated (viral culture or polymerase chain reaction), or had a diagnosis of HIV infection documented by a physician. In a child less than 18 months, HIV is defined by at least two positive results from virologic (non-antibody) tests such as viral culture, P24 antigen testing or PCR; or as documented by a physician diagnosis. Acquired Immunodeficiency Syndrome (AIDS) is defined as those individuals meeting the HIV surveillance case definition, as well as, either CD4⁺ cell counts less than 200 cells per microliter or less than 14% of total lymphocytes, or any one or more of the 26 CDC identified AIDS defining opportunistic infections (OIs). The addition of CD4⁺ cell counts and three additional OIs in the January 1993 AIDS definition expansion is most likely responsible for the one time dramatic increase in the number of AIDS cases diagnosed in 1993.

ORGANIZATION OF THE PROFILE

The epidemiologic profile is organized into 2 main sections, within the 5 key questions are addressed.

Section 1: Core Epidemiologic Questions

This section provides the reader with an understanding of the characteristics of the general population of Kansas, the distribution of HIV disease, and a detailed look at persons at risk for HIV infection. The section is organized around 3 key questions:

Question 1: What are the sociodemographic characteristics of the general population in Kansas?

• Orients the reader to the overall demographic and socioeconomic characteristics of the general population of Kansas.

Question 2: What is the scope of the HIV/AIDS epidemic in Kansas?

• Examines the effect of the HIV/AIDS epidemic on a number of population groups in Kansas to help planners focus prevention and care services.

Question 3: What are the indicators of risk for HIV/AIDS infection in Kansas?

- Provides a detailed look at high-risk populations.
- Examines direct measures of risk behaviors associated with HIV transmission and indirect measures that may serve as the indicators of high-risk behavior.

Section 2: Ryan White HIV/AIDS CARE Act Special Questions and Considerations

This section focuses on questions that pertain to HRSA HIV/AIDS care planning groups. Section 2 describes access to, use of, and standard of care among persons in Kansas who are HIV-infected. It is organized around 2 key questions:

Question 1: What are the patterns of utilization of HIV services for persons in Kansas?

- Characterizes the patterns in the use of services by populations living with HIV/AIDS in Kansas.
- Describes the characteristics of those utilizing Ryan White Title II and Title III care services and the types of services they received.

Question 2: What are the number and characteristics of persons who know they are HIV-positive but who are not receiving primary medical care?

- Assesses the unmet need of persons who know they are HIV positive, but are not in care.
- Characterizes those persons who are categorized as not in primary care.

SECTION 1 CORE EPIDEMIOLOGIC QUESTIONS

Question 1: What are the sociodemographic

characteristics of the general

population in Kansas?

Question 2: What is the scope of the HIV/AIDS

epidemic in Kansas?

Question 3: What are the indicators of risk for

HIV/AIDS infection in Kansas?



What are the sociodemographic characteristics of the general population in Kansas?

SUMMARY

Population: In the 2003 Census estimate of the total population for Kansas was 2,723,508 persons. This represents a 1.3% increase from the published 2000 Census report of 2,688,418. Kansas' boundaries form a nearly perfect rectangle around 105 counties that according to 2003 estimates of population range from 1,420 persons in Greeley County to 486,515 persons in Johnson County. Population density varies widely across the state; with more than 60% of the population living in the eastern third of the state and 62% of the population resides in metropolitan areas (county population greater than 50,000).

The total state land area is 81,815 square miles and the average population density is 33.3 persons per square mile. Kansas has three *major* metropolitan areas (counties with a population density greater than 300 persons per square mile) that contain 47% of the state's population: Kansas City (Wyandotte Co. and Johnson Co.), Wichita (Sedgwick Co.), and Topeka (Shawnee Co.). Nearly one-fourth of the Kansas population is found on the Kansas side of the greater Kansas City metropolitan area. Approximately 17% of the state's population resides in the Wichita metropolitan area. Counties on the western side of the state tend to be less populated; four of these counties have a population of less than 2,000 persons (Greeley, Wallace, Comanche, Lane). Thirty-three counties are classified as "frontier counties" by KDHE Center for Health and Environmental Statistics (Table 1).

Table 1. Percentages of Kansas Counties by Population Density Category, 2003

Classification	Density Range (average per square mile)	Number of Counties (% of total KS counties)
Frontier	< 6.0	33(18.1)
Rural	6.0-19.9	36(31.4)
Densely Settled Rural	20.0-39.9	19(34.3)
Semi-Urban	40.0-149.9	11(10.5)
Urban	≥150	6(5.7)

Source: 2003 Estimates, US Bureau of the Census

Public Health Regional Structure: The KDHE HIV Prevention Section in conjunction with the Community Planning Group and HIV Case-Management Section divides the state into nine regions for the purpose of public health planning. These regions have neither similar geography nor population size. Ranging in size from 31 counties (Region 7) to two counties (Regions 1 and 2) and surrounding urban centers: Kansas City (Region

1), Olathe/Overland Park/Shawnee (Region 2), Lawrence (Region 3), Topeka (Region 4), Pittsburg (Region 5), Manhattan (Region 6), Salina (Region 7), Wichita (Region 8), Garden City (Region 9). Region 8 contains the largest proportion of the state population (27%) and Region 6 contains the smallest (4.9%). The range in the number of counties and the area per region is due to the dramatic differences in population density throughout the state. One of the challenges in Kansas is to develop health education and promotion programs and plans to reach a large but less densely populated state, while meeting the needs of a varied population with specific pockets of need.

Demographic Composition: According to the 2003 census data, the racial and ethnic composition of the state was estimated to be 82.8% White non-Hispanic, 7.8% Hispanic, 6.2% Black non-Hispanic, 2.2% Asian, 1% American Indian (Figure 1).

Age and Sex: According to the 2003 census data the median age of Kansas' residents was 35.5 years. Based on the reported median age of 32.9 years in the 1990 Census in Kansas the population is aging slightly. More than 25% of the population are 18 years of age or younger; 13% of the population are 65 or older. The same data estimates that the proportion of females in the overall population was slightly higher than the proportion of males (50.4% vs. 49.6%).

Poverty, Health Insurance, Income, and Education: The median household income in Kansas from 2001 to 2003 based on the three-year average was \$43,622. The estimated proportion of the population below the federal poverty level for 2002 and 2003 was 14% in Kansas as compared to 17% nationally. Among the 15% of the Kansas population that are reportedly unemployed 56% are reportedly without healthcare coverage.

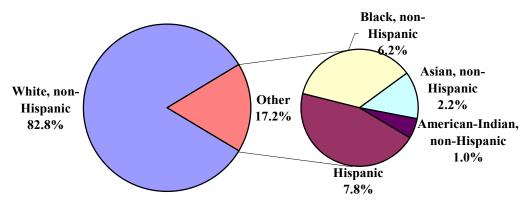
Public Aid: In 2003, approximately 11% of Kansas residents were covered by Medicaid, and about 14% were covered by Medicare. Approximately, 146,900 children 17 years of age or younger rely on Medicaid for their health needs.

DEMOGRAPHICS

The 2003 census data estimates the racial and ethnic composition of the state was estimated to be 82.8% White non-Hispanic, 7.8% Hispanic, 6.2% Black non-Hispanic, 2.2% Asian, 1% American Indian (Figure 1).

According to the Governor's Economic and Demographic Report published in January of 2004, "The demographic make up of Kansas is becoming more diverse. In 1990, the population of Kansas was predominantly White and non-Hispanic in ethnicity. In 2002, the same overall make up remains; however, the proportions of other races and ethnicity display a definite upward trend, especially in the proportion of the Hispanic population." This report sites a change in the estimated proportion of Hispanics from 3.9 percent to 7.6 percent of the total population from 1990 to 2002, respectively. The US Bureau of the Census estimates that the Hispanic population continues to grow in Kansas with an increase from 2002 to 2003.

Figure 1. Kansas State Population Race/Ethnicity Distribution, Census Estimates 2003



Source: Census 2003 Estimates, US Bureau of the Census

The White non-Hispanics maintain the majority in every region; however, their percentage of the population in Regions 1 and 9 is much lower than that of the other regions. The largest Black non-Hispanic population and percentage of the population is in Region 1. More than 50% of Kansas' Hispanic population resides in either Regions 8 or 9. Although the size of the Hispanic populations in these regions are very similar, due to the size of the total population in Region 9 Hispanics account for 31.1% of the population in that region and only 7.4% of the population in Region 8.

Table 2. Percentage of the General Population by Race/Ethnicity and by Public Health Region/Metropolitan Area vs. Non-Metropolitan Area, Kansas, 2003

	Race/Ethnicity									
Region	White, non- Hispanic, %	Black, non- Hispanic, %	Hispanic, %	American Indian, %	Asian/PI, %	Total Population (%)				
1	60.0	22.9	14.4	0.8	1.9	228,638 (8.4)				
2	87.9	3.5	4.4	0.4	3.8	515,702 (18.9)				
3	88.4	3.6	3.2	2.1	2.8	147,321 (5.4)				
4	84.0	6.3	7.3	1.4	1.0	303,917 (11.1)				
5	92.1	2.9	2.3	2.0	0.6	194,620 (7.1)				
6	84.3	7.9	4.2	0.7	2.8	132,611 (4.9)				
7	93.5	1.5	3.9	0.4	0.7	293,455 (10.8)				
8	81.8	6.9	7.4	1.1	2.8	734,065 (27.0)				
9	65.5	1.4	31.1	0.6	1.5	173,179 (6.4)				
Non-Urban	87.8	2.5	7.7	1.0	1.0	1,271,574 (46.7)				
Urban ¹	78.4	9.4	7.9	0.9	3.3	1,451,934 (53.3)				

Source: 2003 Estimates, US Bureau of the Census

Note: Due to rounding percentages may not add to 100%. Crude populations can be achieved by multiplying the total population by the percent value of concern. PI (Pacific Islander).

¹Urban includes counties with a population density ≥150 persons per square mile.

Classifying counties based on population density further describes the distribution of persons throughout Kansas and allows for comparisons of counties with similar population characteristics. In Kansas 6 of the 105 counties have more than 150 persons per square mile and 53.3% of the population lives within these counties. Additionally, the Kansas City Area (Wyandotte and Johnson Counties) contains almost 25% of the state's population and both counties have a population density of more than 1000 persons per square mile. The urban counties are 78.4% White non-Hispanic, 9.4% Black non-Hispanic, 7.9% Hispanic, 0.9% American Indian, and 3.3% Asian/Pacific Islander. The non-urban counties have a greater percentage of Whites (87.8%) and a nearly equal percentage of Hispanics (7.7%), but have relatively few of the other minority groups (4.5% combined).

According to the 2003 census estimates the median age of Kansas' residents was 35.5 years. Based on the reported median age of 32.9 years in the 1990 Census in Kansas the population is aging slightly. More than 25% of the population are 18 years of age or younger; 13% of the population are 65 or older. The age distribution among males and females in Kansas is similar; however, a slightly higher proportion of females are 65 years and older, a trend also noted in nationwide estimates. The same data estimates that the proportion of females in the overall population was slightly higher than the proportion of males (50.4% vs. 49.6%).

Table 3. Percentage Distribution of the General Population by Age Group and Gender, Kansas, 2003

Age Group (yrs.)	Males, % (N=1,350,243)	Females, % (N=1,373,265)	Total Population, % (N=2,723,508)
<2	2.9	2.7	2.8
2-12	15.9	14.7	15.3
13-24	19.0	17.5	18.3
25-44	28.0	26.7	27.4
45-64	23.3	23.2	23.3
≥65	10.8	15.1	13.0

Source: 2003 Estimates, US Bureau of the Census

Note: Due to rounding percentages may not add to 100%. Crude populations can be achieved by multiplying the total population by the percent value of concern.

SOCIOECONOMIC STATUS

In 2003, according to the US Bureau of the Census estimates, nearly every stratification of economic data places Kansas at or below the national average for percentage of people living in poverty. Among children 18 years and younger in 2003 in Kansas 17% were below the federal poverty level as compared to 23% nationally. The unemployed households in Kansas are estimated by the census to be 15% of the total households and nationally 19% of households are classified as unemployed. In Kansas 15% of adults aged 19-64 are uninsured and again Kansas is below the national average of 20%; and only 7% of Kansas children below the age of 18 are uninsured.

Using the 2003 Behavioral Risk Factor Surveillance System (BRFSS), estimates of households carrying any kind of health care coverage (health insurance, prepaid plans, or government plans) indicate 13.1% of the population of Kansas to be uncovered. As expected according to the BRFSS those Kansans whose annual income is lower are more likely to have no health care coverage. However, it is those whose household income ranges from \$15,000 to \$24,999 that were most likely to be uncovered (26.8% of the population). An income of less than \$15,000 was below 100% of the Federal Poverty Level in 2003 (family unit of three) and the individuals in this category are more likely to be eligible for government assistance. In Kansas according to the BRFSS only 23% of the population in this income category is uncovered. Conversely, only 3.4% of the population whose household income is greater than \$50,000 is reported to have no healthcare coverage. Among the unemployed population of Kansas 56% are reportedly without healthcare coverage.

Question 2

What is the scope of HIV/AIDS epidemic in Kansas?

In 1983 KDHE began monitoring the disease known as Acquired Immunodeficiency Syndrome (AIDS). This surveillance was furthered enhanced on July 1, 1999 with the addition of legislation instituting confidential name based reporting of Human Immunodeficiency Virus (HIV) infection. Since that time the HIV/AIDS epidemic has affected people of nearly all gender, age, and racial/ethnic groups, as well as, people in almost 80% of the counties in the state. However, the epidemic has not affected all of these groups equally.

Despite the continuingly disproportionate affect among White men who have sex with men (MSM), recent changes in the trends indicate a potential change to the face of HIV disease among Kansans. Although Blacks have historically maintained the highest rate per 100,000 in Kansas, the rate among Hispanics is increasing at pace that, if it continues, will place the rate among Hispanics above the rate among Blacks.

Changes in the percentage of newly diagnosed cases that are among females are influenced greatly by the reduction in newly diagnosed cases among males. Therefore, examining the frequency counts in addition to the proportions is essential to truly understand the gender distribution of cases.

As the number of people living with HIV disease continues to increase (due to improvements in treatment and a relatively stable number of new diagnoses) it has become increasingly important to focus limited resources on those populations most affected and most at risk for HIV.

HIGHLIGHTS

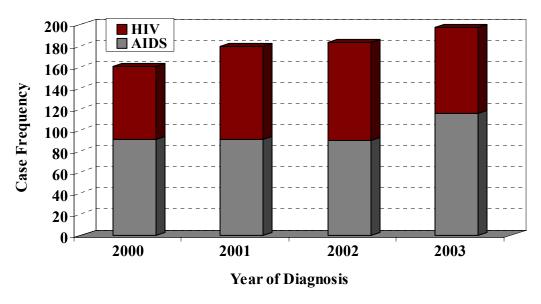
- During 2003, 116 (58.9%) new AIDS cases were diagnosed and reported and 81 (41.1%) HIV cases were diagnosed and reported.
- At the end of 2003, a total of 1,471 persons were presumed to be living with HIV infection in Kansas; of these, 75.1% (1,105 persons) had an AIDS diagnosis.
- The number of deaths showed a decline in 2000 to 33 deaths, but from 2001-2003 has stabilized around 50 deaths per year.
- Those newly diagnosed in 2003 that designate another country as their country of origin are responsible for 25% of the cases categorized as "No Identifiable Risk" (NIR).
- Despite small numbers among Hispanics, there is a rising concern for this population and their risk for infection with HIV.
- With the development of HAART therapies now approaching its eighth year and the
 ability of HIV to mutate into multi-drug resistant variants, mortality rates could also
 be affected by the emergence of untreatable patients with resistance to every available
 therapy and combination therapy.

This section provides detailed information about demographic and risk characteristics of HIV infected persons and trends in the statewide epidemic. It describes cases diagnosed through 2003 and reported through September 2004. Due to the small number of cases trends are described and analyzed in three-year increments. The regional epidemiologic profiles included at the end of this section provide a more detailed description of the epidemic in each public health region. Unless noted, all data come from Kansas' HIV/AIDS Surveillance Program.

OVERALL HIV/AIDS TRENDS

Statewide during 2003, a total of 152 new cases of HIV infection were diagnosed (anonymous tests results from this time period were not collected and consequently are not included in this count). This number reflects those persons whose HIV infection was first diagnosed in 2003 and who were reported to the state health department. AIDS and HIV infection may be diagnosed at the same time. If a person is diagnosed with AIDS and HIV in the same year, they are counted as an AIDS case only, to avoid "double-counting." Once diagnosed with AIDS, a person does not re-enter the HIV "pool," even if they no longer meet the case definition of AIDS (e.g. a person who is HIV positive in 2003 who subsequently develops *Pneumocystis carinii* pneumonia (PCP) becomes an AIDS case and does not become an HIV cases if the PCP is resolved). During 2003, 116 (58.9%) new AIDS cases were diagnosed and reported and 81 (41.1%) HIV cases were diagnosed and reported. The increase represented in Figure 2 is due to an increase in the number of AIDS cases diagnosed rather than HIV cases.

Figure 2. Trends in Cases of HIV Infection and AIDS, Kansas, 2000-2003



The number of persons living in Kansas with HIV infection has increased every year and in the last ten years has more than doubled (Figure 2). This is likely a product of

prolonged life due to improved treatments for those previously diagnosed and a relatively stable number of new infections. At the end of 2003, a total of 1,471 persons were presumed to be living with HIV infection in Kansas; of these, 75.1% (1,105 persons) had progressed to AIDS. Among the 152 newly diagnosed cases of HIV infection in 2003, 45 (29.6%) were simultaneously diagnosed with HIV and AIDS. Historically the proportion of HIV infection cases diagnosed and reported converting to AIDS within one year of the HIV diagnosis have remained relatively stable (Figure 3).

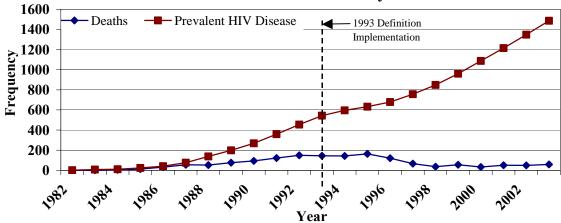
Conversion from HIV to AIDS Time Period 100% 90% 80% 69 88 93 70% Case Distribution, % 60% 50% 16 40% 30% 61 56 20% 50 10% 0% 2001 Year of Diagnosis 2000 2002 ■1 Year or Less ☐ Between 2 and 5 years ■ HIV Only

Figure 3. Newly Diagnosed HIV Cases by Year and Conversion from HIV to AIDS Time Period

Prevalence numbers represent a minimum estimate of the actual persons living with HIV in Kansas at the end of 2003. As previously mentioned the number does not include those who only test anonymously or those who are infected and have not been tested. Historically Kansas has accounted for approximately 0.03% of the total number of cases of HIV infection reported in the United States. Assuming that this trend continues to be true, the Kansas HIV/AIDS Surveillance Program estimates that there are between 2,550 and 2,850 persons living in Kansas with HIV infection with or without knowledge of their status. Therefore, estimates indicate that there were between 900 and 1,300 persons living in Kansas who were still unaware of their infection status at the end of 2003.

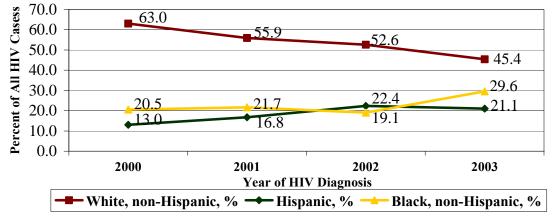
As noted in Figure 4, the number of prevalent cases in Kansas has consistently risen and deaths have remained relatively stable, never exceeding 164 deaths per year. From 2000 to 2003 the number of prevalent cases increased by 35.5% (1,086 to 1,471). The number of deaths showed a decline in 2000 to 33 deaths, but from 2001-2003 the number stabilized at around 50 deaths per year. This is not surprising, considering that prevalent cases are an accrual of many years and deaths are reported only in the year they occur. The total number of deaths to HIV/AIDS in Kansas since 1983 is 1,522.

Figure 4. Kansas HIV Disease Prevalence and Deaths Related to HIV/AIDS by Year



During the last four years, despite a downward trend in the number of cases diagnosed among non-Hispanic Whites, there have been an increasing number of HIV cases diagnosed among non-Hispanic Blacks and Hispanics (Figure 5). While historically, non-Hispanic Blacks in Kansas have been disproportionately affected by HIV/AIDS, the Hispanic population has recently emerged as another major population of concern. According to the 1990 and 2000 census figures, the Hispanic population in Kansas has more than doubled in the last ten years and seems to be steadily growing.

Figure 5. Kansas Major Race/Ethnicity Categories by Percent of All Cases Diagnosed by Year of HIV Diagnosis, 2000-2003



Minority groups compose 37.9% of all persons living in Kansas with HIV infection and 54.6% of all newly diagnosed HIV infections in 2003 in Kansas. Hispanics and African Americans are the leading contributors to this minority population accounting for 21.1% and 29.6% of all newly diagnosed HIV infections respectively (Table 4).

The proportion of newly diagnosed HIV/AIDS cases reported among women in Kansas has been somewhat inconsistent. During the last two years this proportion has eclipsed 20% for the first time, when 21.3% and 27.9% of the cases diagnosed in 2002 and 2003 respectively were in women (Table 4). Some of this change can be attributed to reductions in the number of male cases diagnosed and reported, particularly over the last three years. From 2000 to 2003 the number of female cases diagnosed each year has increased 89.6% from 29 cases in 2000 to 55 cases in 2003, while the total number of cases has only increased 23.1% from 160 cases to 197 cases. However, due to the small number of cases the percent differences are more sensitive to small changes in numbers.

The majority of persons newly diagnosed with HIV infection in 2003, as well as, the majority of those living with HIV infection at the end of 2003 were between the ages of 25 and 44 (Table 4). In 2003, there were three children (less than 12 years of age) diagnosed with HIV in Kansas. Diagnoses among those between the ages of 45 and 64 for the second consecutive year topped 20% of the total percent of new cases. For the last four years although this age group has averaged 18.4% of the cases newly diagnosed in Kansas it has averaged 24.6% of the cases converting from HIV to AIDS within one year. Additionally, this age group has a higher proportion of cases converting from HIV to AIDS within one year (50.6%) than any other age group. This could indicate that the 45 to 64 year old age group is testing later in the course of the disease than any other age group.

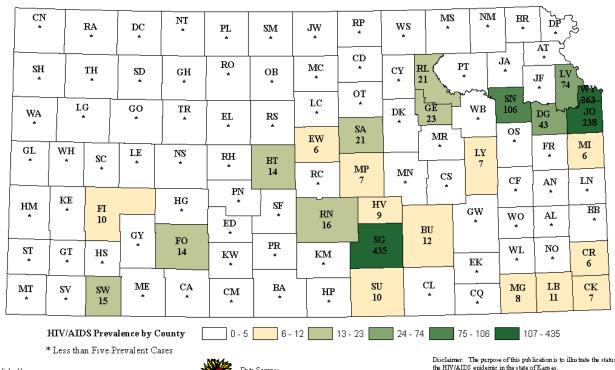
In 2003, more cases of HIV infection were diagnosed in Region 8 (32.2%) than in any other. However, Regions 1 and 2 closely followed Region 8 with 26% and 20% of the newly diagnosed HIV infection, respectively. Comparing HIV infection rates (number of cases per population in the region) controls for the varying populations in each region and Region 1 has the highest rate of 17.5 per 100,000. Among those living with HIV/AIDS at the end of 2003, 33.6% reside in Region 8 and another 39.5% live in Regions 1 and 2 around Kansas City (Table 4).

Table 4. Characteristics of persons infected with HIV (HIV/AIDS), Kansas, 2003

Kansas, 2003	HIV/AIDS CASES DIAGNOSED, 2003			PERSONS LIVING WITH HIV/AIDS, THROUGH 2003		
	N	%	Rate ¹	N	%	Rate ¹
TOTAL	197	100.0	7.2	1,471	100.0	54.0
GENDER						
Male	142	72.1	10.5	1,217	82.7	90.1
Female	55	27.9	4.0	254	17.3	18.8
RACE/ETHNICITY						
Hispanic	38	19.3	17.9	186	12.6	87.5
American-Indian	1	0.5	3.8	12	0.8	45.7
Asian	1	0.5	1.6	6	0.4	9.9
Black Non-Hispanic	58	29.4	34.4	322	21.9	191.0
White Non-Hispanic	91	46.2	4.0	914	62.1	40.5
Multi-Race	8	4.1	*	26	1.8	*
Unknown	0	0.0	*	5	0.3	*
AGE GROUP (YRS.)						
<2	1	0.5	1.3	5	0.3	6.5
2-12	2	1.0	0.5	5	0.3	1.2
13-24	20	10.2	4.0	130	8.8	26.1
25-44	135	68.5	18.1	1,093	74.3	146.6
45-64	39	19.8	6.2	233	15.8	36.8
>64	0	0.0	0.0	5	0.3	1.4
PUBLIC HEALTH REGION						
1	49	24.9	21.4	337	22.9	147.4
2	36	18.3	7.0	244	16.6	47.3
3	7	3.6	4.8	52	3.5	35.3
4	15	7.6	4.9	131	8.9	43.1
5	2	1.0	1.0	41	2.8	21.1
6	9	4.6	6.8	51	3.5	38.5
7	12	6.1	4.1	68	4.6	23.2
8	61	31.0	8.3	494	33.6	67.3
9	6	3.1	3.5	53	3.6	30.6

¹Rates per 100,000 persons in racial/ethnic subgroups *No available denominator for these categories from the current Census estimates.

Figure 6 Kansas HIV/AIDS Prevalence by County as of December 31, 2003



Published by: Kansas Department of Health and Environment Bureau of Epidemiology and Disease Prevention Information Systems, Geographic Data Services



Disclaimer: The purpose of this publication is to illustrate the status of the HIV/AIDS epidemic in the state of Kars as. This map product is provided without representation or implied or

expressed warranty of accuracy for any uses beyond those expressed The originating agencies are not responsible for publication or use of this product for purposes other than those expressed. This product may be connected or updated as necessary without prior notification.

Prevalence calculations for HIV/AIDS are based on counts by residence at diagnosis. These statistics do not take into account in state or out-of-state migration patterns unless alternately specified. The HIV/AIDS Surveillance Program is not designed to track cases individually and passively collects address information after diagnosis when contacted by other state surveillance programs or when observed through other normal surveillance activities. As of December 31, 2003, a total of 1,471 persons were reported to be living with HIV/AIDS in Kansas. This map illustrates the counties where these persons lived when diagnosed with HIV or AIDS (Figure 6). Currently, 83 counties approximately 80% of all counties in Kansas have been affected by HIV/AIDS. Four of the 105 counties in Kansas contain more than 100 prevalent HIV/AIDS cases. These counties are also the four largest counties in the state by population. The six urban counties (population density ≥ 150 persons per square mile) contain 78.8% of all prevalent cases.

HIV/AIDS, BY RACE/ETHNICITY AND SEX

The epidemic significantly affects both males and females in the non-Hispanic Black communities with nearly the same number of new HIV diagnoses in both groups (24 and 21 respectively). In all other racial/ethnic communities, females are less significantly affected. Non-Hispanic Black females accounted for 51% of all newly diagnosed HIV disease cases among females in Kansas in 2003 (Table 5).

Table 5. HIV diagnoses and rates, by race/ethnicity and Gender, Kansas, 2003

	Males		F	Females		Total		
Race/ethnicity	N	% ¹	N	% ¹	N	% ¹	Rate ²	
White, non-Hispanic	59	38.8	10	6.6	69	45.4	3.1	
Black, non-Hispanic	24	15.8	21	13.8	45	29.6	26.6	
Hispanic	23	15.1	9	5.9	32	21.0	15.1	
Other/unknown	5	3.3	1	0.7	6	4.0	*	
Total	111	73.0	41	27.0	152	100.0	5.6	

¹Calculated as the percentage of all newly diagnosed HIV disease in 2003.

Analyzing trends based on the number of new diagnoses by racial/ethnic group and gender in Kansas by one-year increments is not possible due to the small number of cases. As the divisions or strata increase the number of cases per group gets smaller and smaller and becomes too small to analyze. However, using data from 2000 to 2003 we can see a gradual decline in the number of cases among White males from 77 to 59 respectively. All other groups would require grouping data from multiple years to reach an adequate number of cases for analysis, and due to the relatively new emergence of cases among these other groups, this comparison is not beneficial in Kansas. The number of cases diagnosed among non-Hispanic Black females in 2003 was higher than any previous year, but there is insufficient data to further quantify this observation. Similar peaks were not observed among non-Hispanic Black males or any other major male or female racial/ethnic group.

During the last four years, despite a downward trend in the number of cases diagnosed among non-Hispanic Whites, there have been an increasing number of HIV cases diagnosed among non-Hispanic Blacks and Hispanics. Disease rates account for changes in the population that case counts only do not. Using HIV/AIDS rates averaged for selected overlapping time periods (Figure 7) to smooth the data and a race-adjusted rate for the entire state there are two trend lines that show an increase. The race-adjusted rate for the state indicates an increase in the newly diagnosed and reported HIV/AIDS rate controlling for racial/ethnic influence. (Adjusting for race eliminates any effect caused by a difference in rates among racial/ethnic groups.) The trend lines also show an increasing rate among Hispanics.

The rate among Hispanics for the time period of 2001 to 2003 was 14.7 per 100,000 population (95% C.I. 9.5, 20.0). The rate for non-Hispanic Whites was 3.4 per 100,000 population (95% C.I. 2.6, 4.2) in the same time period. The rate of HIV infection in Hispanics was more than four times that of non-Hispanic Whites. If this trend continues

the number of cases among Hispanics could surpass the number of cases among non-Hispanic Whites.

When we compare the rates of HIV infection among racial/ethnic groups in Kansas there is a statistically significant difference between the rates of non-Hispanic Whites and both Hispanics and non-Hispanic Blacks. The rate of HIV infection among Hispanics was 37.1% (p=0.0846 for 2000-2002) and 32.8% (p=0.1129 for 2001-2003) lower than the rate among non-Hispanic Blacks during these time periods. However, neither of these is statistically significant.

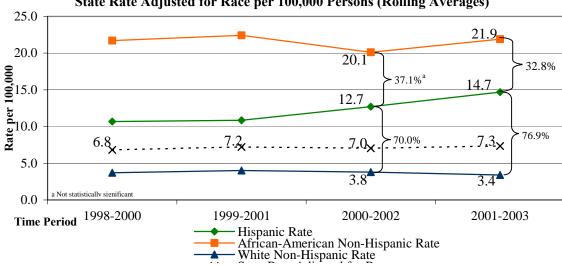


Figure 7. Newly Diagnosed and Reported HIV/AIDS Rates with State Rate Adjusted for Race per 100,000 Persons (Rolling Averages)

Between 2000 and 2002 the rate among non-Hispanic Whites was 70.0% (p= < 0.0001) lower than the rate among Hispanics and 81.1% (p=< 0.0001) lower than the rate among non-Hispanic Blacks. However, for the time period of 2001-2003, the differences were 76.9% (p=< 0.0001) and 84.5% (p=<0.0001) respectively. These numbers demonstrate that the difference between rates among minorities and rates among non-Hispanic Whites are growing larger. The HIV rate among non-Hispanic Whites is relatively stable, but the HIV rates among minorities are increasing, particularly among Hispanics. There are several limitations to this analysis. Due to the small number of cases in Kansas each year and the limited time since name-based confidential HIV reporting began (July 1999), comparisons to historical data are limited. Comparisons of rates using smoothed data other than between 2000-2002 and 2001-2003 cannot be made because the institution of confidential name-based HIV reporting in July of 1999 makes conclusions incomparable.

Despite small numbers among Hispanics there seems to be a rising concern for this population and their risk for infection with HIV. Considering the number of cases among non-Hispanic Whites in Kansas the majority of prevention efforts should continue to be focused on this group. However, it is imperative that we do not neglect the potential for prevention among minority populations, including Hispanics. If the trend of increasing rates of infection among Hispanics continues in Kansas there will be a change in the population with the highest HIV rate in the state moving from non-Hispanic Blacks to Hispanics.

HIV/AIDS, BY AGE GROUP

In 2003, persons aged 25-44 at the time of diagnosis accounted for nearly two-thirds (65.1%) of the 152 newly diagnosed HIV disease cases. Males aged 25-44 accounted for 48% of these newly diagnosed HIV diseases cases. The majority of newly diagnosed women (63.4%) were also in this group.

Table 6. HIV diagnoses by Age Group and Gender, Kansas, 2003

	Males		Females			Total
Age Group (yrs.)	N	% ¹	N	% ¹	N	% ¹
<2	1	0.7	0	0.0	1	0.7
2-12	2	1.3	0	0.0	2	1.3
13-24	13	8.6	6	4.0	19	12.5
25-44	73	48.0	26	17.1	99	65.1
45-64	22	14.5	9	5.9	31	20.4
≥65	0	0.0	0	0.0	0	0.0
Total	111	73.0	41	27.0	152	100.0

¹Calculated as the percentage of all newly diagnosed HIV disease in 2003.

Among the 197 newly diagnosed with HIV or AIDS, 67.9% (55) and 69.0% (80) respectively were aged 25-44. All other distribution of cases by age group previously mentioned was also true for these newly diagnosed cases.

The age distribution in Kansas has been relatively stable for the last five years. There has been a slight reduction in the number of cases among those aged 25-44 and a slight increase among those aged 13-24. The largest change has come among those 45-64 with an increase of five cases from the total in 1999. No obvious trend can be concluded from age analysis in Kansas except that those aged 25-44 have and continue to be the largest group represented among those newly diagnosed with HIV disease.

HIV/AIDS, BY MODE OF EXPOSURE

The proportion of cases attributed to specific exposure (i.e., risk) categories has not changed considerably in the last four years among newly diagnosed HIV disease cases with the exception of one group, those whose risk was not identified (NIR). Throughout the surveillance of HIV/AIDS in Kansas most HIV transmission has occurred among MSM; however, the proportion of cases attributed to male-to-male sexual activity has been declining slightly (Figure 8).

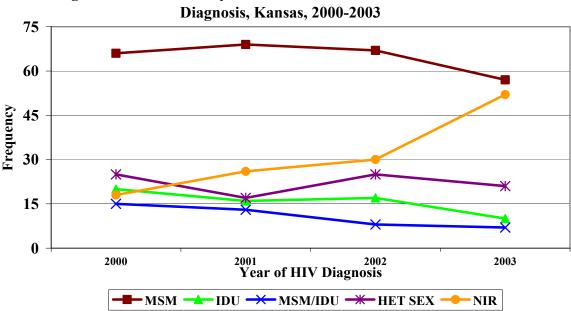
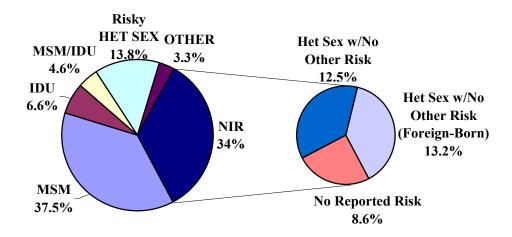


Figure 8. HIV Disease by Mode of Transmission and Year of HIV

The most notable change in the trends in exposure categories is the increase among those classified as NIR. Although some of the cases newly diagnosed in 2003 will be recategorized with time, the number of NIR cases nearly doubled from 2002 to 2003. A portion of this increase could be due to the increase in new diagnoses among women (44.2% of new NIR). Fifty-six percent of the newly diagnosed cases among women were classified as NIR. A large percentage of NIR cases will not ever be reclassified due to current exposure category definitions. At this time there is no category for those whose sexual exposure is heterosexual, but are not originally from the United States. Those newly diagnosed in 2003 that designate another country as their country of origin are responsible for 25% of the cases categorized above as NIR. Additionally, 38.5% of those categorized as NIR in 2003 can be further described as persons whose only risk is described as heterosexual sex. These persons are not classified with those whose risk is heterosexual contact because the contact is not with a person known to be infected or at increased risk for HIV infection (e.g., an IDU). Only 8.6% of those newly diagnosed with HIV infection in 2003 have no risk reported (Figure 9). These proportions have been relatively stable for the last two years, but prior to 2002 most NIR cases truly did not have a risk reported.

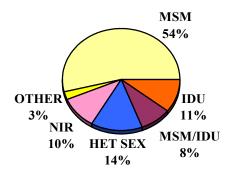
Figure 9. Newly Diagnosed HIV Disease Proportional Distribution by Mode of Transmission, Kansas, 2003



MSM prevalent cases of HIV/AIDS continue to be the most predominant among all prevalent cases in Kansas as of the end of 2003 (Figure 10) though the proportion of MSM among prevalent cases has declined over time. This decline may be due to reductions in risk behaviors among this group.

Funding for behavioral studies has not been made available to Kansas. Recently; however, efforts are in place to assess the prevalence of risk behaviors among those being tested in counseling and testing sites. Although the differences between prevalent HIV (non-AIDS) cases and prevalent AIDS cases are minor, the majority of this difference is accounted for by prevalent HIV (non-AIDS) cases categorized as NIR. Among prevalent HIV (non-AIDS) cases, 22.4% are NIR and among prevalent AIDS cases only 6.2% are classified as NIR. Additionally, among prevalent AIDS cases 57.4% are MSM; whereas 43.2% are MSM among prevalent HIV only cases.

Figure 10. Prevalent HIV/AIDS Proportional Distribution by Mode of Transmission, Kansas, 2003

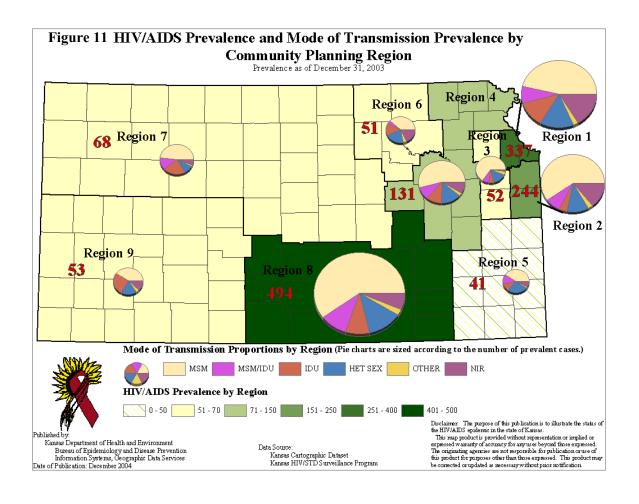


Among both non-Hispanic Blacks and Whites, the number of new cases diagnosed among MSM has declined during recent years; however, this decline is more pronounced among Whites. As in all other analyses there are more cases diagnosed among MSM than any other group regardless of race or ethnicity. Among non-Hispanic White males there has been a reduction in every risk category as the total number of new diagnoses among them has been reduced. All other analysis produces little to no change in the trends among racial and ethnic groups by gender over time.

Regional comparisons of category of exposure provide important information for the development of prevention messages in specific geographic areas of the state. The regional comparisons provide some insight into the distribution of risk groups throughout the state (Table 7). The largest proportion of prevalent cases is in the MSM category of exposure in every region.

Table 7. Kansas HIV/AIDS Prevalence (%) by Category of Exposure and Region

Region	MSM	IDU	MSM/IDU	Het Sex	NIR	Other	Total (N)
1	46.6	11.9	7.4	16.0	15.7	2.4	(337)
2	59.4	4.5	7.8	11.9	13.5	2.9	(244)
3	65.4	5.8	7.7	15.4	1.9	3.9	(52)
4	54.2	11.5	9.2	14.5	8.4	2.3	(131)
5	41.5	9.8	12.2	26.8	7.3	2.4	(41)
6	39.2	13.7	3.9	21.6	17.7	3.9	(51)
7	48.5	23.5	11.8	8.8	5.9	1.5	(68)
8	59.3	9.5	10.1	12.8	6.1	2.2	(494)
9	41.5	24.5	0.0	18.9	11.3	3.8	(53)
Total (N)	(792)	(156)	(125)	(211)	(150)	(37)	1,471



AIDS TRENDS AND HIV/AIDS MORTALITY

Highly active antiretroviral therapy (HAART) was introduced in 1996. These medications have been effective in the treatment of HIV infection and, since that time, have altered the natural progression of HIV infection. HAART has delayed the progression from HIV to AIDS and from AIDS to death for people infected with HIV. This is especially true for those tested earlier in the course of the disease. Because of the widespread use of the HIV treatments, Kansas, along with the rest of the nation, has seen declines both in the number of new AIDS cases diagnosed and the number of AIDS-related deaths. For this reason, AIDS surveillance data no longer accurately represent trends in HIV transmission. Rather, AIDS surveillance data now reflect differences in access to testing and treatment, as well as the failure of certain treatments. Consequently, AIDS incidence and deaths, since 1996, provide a measure for identifying and describing the populations for whom treatment may have not been accessible or effective.

AIDS Trends

From 1997 to 2002, the number of newly diagnosed cases declined nearly every year. However, the number of newly diagnosed AIDS cases increased in 2003 for the first time since the introduction of HAART in 1996 (Figure 11). At this point we do not have a plausible explanation for this increase.

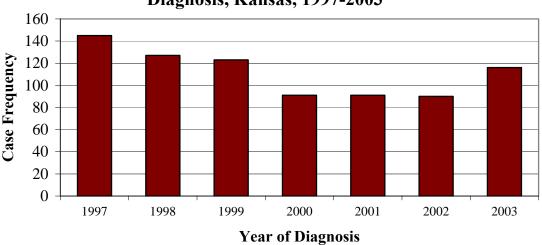


Figure 12. Newly Diagnosed AIDS Cases by Year of Diagnosis, Kansas, 1997-2003

In 2003, despite remaining the minority in AIDS cases, for the first time females diagnosed with AIDS increased above 25% of the total cases diagnosed with 30 new cases among females. The trend of reduction among males accounts for most of the change in this proportions, however, there were more cases of AIDS diagnosed among women in 2003 than any year prior. The number of cases among women has remained stable until the most recent year where both the males and females increased (Figure 12). Due to the smaller number of cases among females, as compared to males, the doubling of cases among females is not statistically more significant than the increase of nine cases among males. However, in 2003 the number of newly diagnosed AIDS cases among

females was closer than any year prior to the number of cases newly diagnosed cases among males.

Diagnosis and Gender, Kansas, 1997-2003 160 140 Females - Males 120 Case Frequency 100 80 60 40 20 0 1997 1998 1999 2000 2001 2002 2003 Ýear of Diagnosis

Figure 13. Newly Diagnosed AIDS Cases by Year of

AIDS diagnoses among minorities have also shown an increase in Kansas (Figure 13). Despite the relatively steady decline among non-Hispanic Whites both the non-Hispanic Blacks and Hispanics have shown a recent increase.

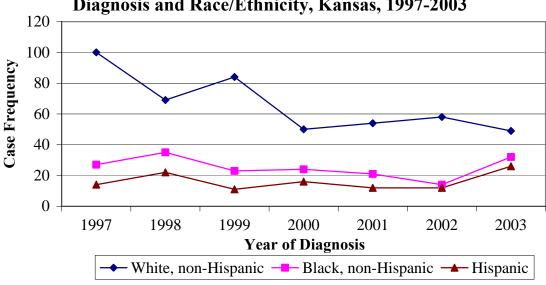


Figure 14. Newly Diagnosed AIDS Cases by Year of Diagnosis and Race/Ethnicity, Kansas, 1997-2003

The trends in AIDS case distribution by gender and race/ethnicity do reflect the overall influence on trends in Kansas that non-Hispanic White males have accounted for historically. However, the newest changes indicate that this influence may be decreasing. Although progression to AIDS may indicate disparities in access to care or the effectiveness of treatment, the proportional distribution of persons with a new diagnosis

of AIDS is also related to the characteristics of persons living with HIV/AIDS. Using the diagnoses of HIV as a comparison to the newly diagnosed AIDS cases can serve to indicate disparities in access to care and treatment among those that are HIV infected. These comparisons would be better suited for larger populations with a more stable epidemic, but even with a small population the racial/ethnic distribution of conversion to AIDS does not appear to be significantly different from the distribution among HIV diagnoses in 2002. However, comparing the newly diagnosed AIDS cases to prevalent AIDS cases at the end of 2003 there are some differences in characteristics (Table 7). These differences were discussed in the description of newly diagnosed cases and trends, but are also seen when comparing prevalent cases to newly diagnosed cases. This indicates some potential changes to the face of the epidemic in Kansas.

Table 8. Characteristics of Persons with AIDS, Kansas, 2003

	Persons Newly	Diagnosed, 2003	Persons Living with	h AIDS through 2003
	N	0/0	N	0/0
Gender				
Male	86	74.1	940	85.1
Female	30	25.9	165	14.9
Race/Ethnicity				
White, non-Hispanic	49	42.2	716	64.8
Black, non-Hispanic	32	27.6	229	20.7
Hispanic	26	22.4	124	11.2
Other/Unknown	9	7.8	36	3.3
Age Groups (yrs.)				
<2	1	0.9	2	0.2
2-12	1	0.9	4	0.4
13-24	9	7.8	77	7.0
25-44	80	69.0	837	75.7
45-64	25	21.6	182	16.5
≥65	0	0.0	3	0.3
Public Health Regions				
1	27	23.3	260	23.5
2	18	15.5	184	16.7
3	3	2.6	44	4.0
4	11	9.5	102	9.2
5	2	1.7	27	2.4
6	2	1.7	32	2.9
7	8	6.9	47	4.3
8	40	34.5	377	34.1
9	5	4.3	32	2.9
Total	116	100.0	1,105	100.0

The regions surrounding Wichita and Kansas City continue to have the largest number of new diagnoses and the largest number of prevalent cases as well. Comparing AIDS cases by population density reveals a distinct difference in gender distribution of newly diagnosed cases. Among those counties designated as non-urban, 13 (52%) cases were diagnosed among males and 12 (48%) AIDS cases were diagnosed among females. This

is in strong contrast to the distribution of cases among males and females in urban counties. Among urban counties 73 (80.2%) males and 18 (19.8%) females were newly diagnosed with AIDS in 2003. Although the proportions are less stable among non-urban counties it is of note that nearly the same number of females were diagnosed among urban and non-urban counties, but the number of males was significantly different. This observation should be noted and observed for possible future trend developments.

Since the beginning of AIDS reporting there has been a dramatic reduction in the proportion of cases diagnosed with opportunistic infections (OI). The changes in reporting practices and surveillance procedures have definitely contributed to the number of infections reported. Additionally, with the introduction of HARRT in 1996 the number of OIs reported nationwide has decreased. Grouping AIDS cases by the year of AIDS diagnosis into three year time periods provides strength in numbers to analyze the declining trend in the proportion of cases subsequently diagnosed with OIs (Figure 14). In the most recent time period the majority of AIDS cases were not converted from HIV based on the diagnosis of an opportunistic infection, but rather a low CD4 count. Among those AIDS cases diagnosed in the time period 2001-2003, 92.9% have had an AIDS defining CD4 count and only 30.6% have been diagnosed with at least one OI.

100% **◆95.5**% 90% Percent of AIDS Cases 80% 76.3% **70%** 60% 51.9% 50% 41.1% 40% 30.6% 30% 20% 10% 0% Pre 1992 1992-1995 1998-2000 2001-2003 1995-1997 **Time Period**

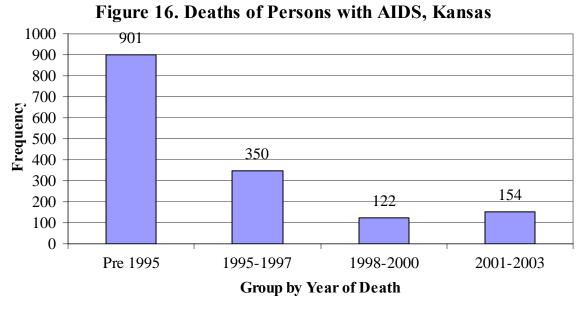
Figure 15. Proportion of AIDS Cases Diagnosed with an Opportunistic Infection by Time Period of AIDS Diagnosis

Mortality Trends

Death reports in Kansas are forwarded to the surveillance program any time either the immediate or secondary cause of death is noted to be HIV or AIDS on the death certificate. Additionally, the Social Security Death Index is routinely researched to identify deaths that may not have been reported to the surveillance program. The mortality data that follow are presented in a variety of ways. In some instances, data on characteristics of persons living with AIDS has been included to provide context and to assist in interpretation. Death information is grouped into three-year periods in order to strengthen the stability of data and provide trend information.

The most recent three-year period (2001-2003) shows a slight increase in deaths over the previous period (Figure 14). Despite this trend during the last three years, the trend after the peak in 1995 (164) showed an overall decline in the number of deaths among persons with AIDS. Since 1996, AIDS-related mortality has declined sharply, coinciding with the emergence of highly active antiretroviral therapy (HAART). Although the number of deaths has not reached the 1996 high, in the most recent years there has been a slight increase in AIDS related deaths. This increase may reflect limited access to, or use of, health care services, and the limitations of current therapies among persons in care. The number of AIDS related deaths dropped to 33 in 2000 but from 2001-2003 the number has stabilized at around 50 deaths per year. Additionally, as the HIV/AIDS population ages an increase in the number of deaths is expected. With the development of HAART therapies now approaching its eighth year and the ability of HIV to mutate into multidrug resistant variants, mortality rates could also be affected by the emergence of untreatable patients with resistance to every available therapy and combination therapy. Additionally, as the prevalent HIV/AIDS population ages an increase in the number of deaths is expected.

Increasing efforts to obtain vital status data from multiple sources is may also be part of the basis for the increase in the last three years. The HIV/STD surveillance program has increased efforts in this time period to integrate with the Ryan White Title II/ADAP program, which has facilitated an increase in the availability of timely reporting of deaths among those enrolled in that program rather than relying solely on vital statistics data.



Among those persons with AIDS who died between 2001 and 2003, 90.3% had an AIDS defining CD4 count and 52.6% of these persons were diagnosed with at least one OI. Between 2001 and 2003, most of the persons with AIDS who died were men (84.4%), which is consistent with the fact that 85.1% of the persons living with AIDS were men (Table 8). There is no notable difference between the age group with the highest number of deaths and the age group with the highest number of prevalent cases of AIDS. There are no differences in the number of deaths among persons with AIDS by race/ethnicity

and the number of prevalent AIDS cases by race/ethnicity. There is no indication of an overrepresentation of any racial or ethnic group among those with AIDS dying between 2001 and 2003.

Table 9. Characteristics of Persons with AIDS Who Died and Persons Living with AIDS, Kansas

		g persons with 001-2003	Persons Living with	AIDS through 2003
	N	0/ _n	N	0/ _n
Gender				
Male	130	84.4	940	85.1
Female	24	15.6	165	14.9
Race/Ethnicity				
White, non-Hispanic	98	63.6	716	64.8
Black, non-Hispanic	31	20.1	229	20.7
Hispanic	18	11.7	124	11.2
Other/Unknown	7	4.5	36	3.3
Age Groups (yrs.)*				
<2	0	0.0	2	0.2
2-12	0	0.0	4	0.4
13-24	10	6.5	77	7.0
25-44	114	74.0	837	75.7
45-64	30	19.5	182	16.5
≥65	0	0.0	3	0.3
Public Health Regions			-	
1	28	18.2	260	23.5
2	14	9.1	184	16.7
3	5	3.2	44	4.0
4	12	7.8	102	9.2
5	5	3.2	27	2.4
6	3	1.9	32	2.9
7	11	7.1	47	4.3
8	72	46.8	377	34.1
9	4	2.6	32	2.9
Total	154	100.0	1,105	100.0

^{*}Age at diagnosis.

Comparing the regional distribution of deaths among persons with AIDS in the time period 2001-2003 to the regional distribution of prevalent AIDS cases at the end of 2003 illustrates some minor differences. Despite containing 40.2% of the prevalent AIDS cases in Kansas the regions surrounding Kansas City (1 and 2) only account for 27.3% of the deaths among persons with AIDS in Kansas. Region 8 (Wichita) accounts for nearly all of this difference with 46.8% of the deaths among persons with AIDS, but only 34.1% of the prevalent AIDS cases in Kansas. Although data concerning deaths is difficult to interpret, this disproportionate effect in Region 8 may reflect a difference in the availability of services and treatments in and around Kansas City. All other regional differences are difficult to interpret due to the small number of deaths and prevalent cases.

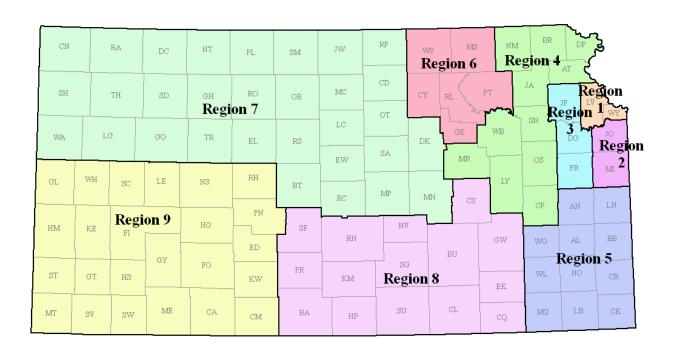
REGIONAL PROFILES

Each HIV case management-planning region is presented in some detail. Those regions with fewer identified cases and smaller numbers of prevalent cases will not be discussed as thoroughly as those regions with larger numbers. This is done mostly to assure the confidentiality of infected persons. Also, smaller numbers mean that rates and proportions are statistically unstable so conclusions drawn are more likely to be erroneous. Changes from one year or group of years may reflect true changes, but are more likely the result of normal variations that present as large changes with small numbers.

Prevalent HIV and AIDS cases and region of current residence are presented and used for calculations in this section. Most of the information on prevalent cases is presented in the table, with less emphasis in the narrative.

Since Kansas implemented HIV reporting on July 1, 1999, the HIV positive data does not reflect the total burden of the epidemic within the Kansas community.

HIV/AIDS Community Planning Regions



Published by: Kansas Department of Health and Environment Bureau of Epidemiology and Disease Prevention Information Systems, Geographic Data Services Date of Publication: December 2004



imer: The purpose of this publication is to illustrate the status of

Disclaimer: The purpose of this publication is to like take the status of the HTV/AIDS epidemic in the state of Kansa.

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Counties in Region 1:	Leavenworth Wyandotte
2003 Estimated Population of Region 1	228,638
Prevalent HIV/AIDS Presumed Living in Region 1	337

Regional Information

Region 1 is in the northeastern section of Kansas and includes two counties as well as the city of Kansas City, Kansas. This is geographically the smallest region in the state. Non-Hispanic Whites make up 60% of the region's population, non-Hispanic Blacks 22.9%, Hispanic 14.4%, Asian or Pacific Islanders 1.9% and less than one percent of the population is Native American. This region has the largest percentage of non-Hispanic Blacks and the second largest percentage of Hispanics in the state. Region 1 contains the highest and the sixth highest ranked counties by total population density.

HIV Disease Diagnosed 2000-2003

There were 100 newly diagnosed HIV disease cases between 2000 and 2003 in Region 1, with an average rate of 14.6/100,000/year. This is the highest rate in the state. These cases are relatively even in their distribution by race/ethnicity. The highest proportion of newly diagnosed cases between 2000 and 2003 was among non-Hispanic Blacks (38%), followed by non-Hispanic Whites (37%), and Hispanics (23%). Analyzing cases by mode of transmission reveals the highest number of cases diagnosed among those with no identified risk (40%), closely followed by MSM (31%), and risky heterosexual sex (15%). Sixty-five percent of the newly diagnosed HIV disease in Region 1 was diagnosed in persons aged 25-44. Among females newly diagnosed with HIV disease, 41% (11) were non-Hispanic Blacks and 33.3% (9) were non-Hispanic Whites. Among newly diagnosed males, the race/ethnicity proportions were similar to the overall disease distribution in this region with 38.4% of the cases among males being diagnosed in non-Hispanic Whites, 37% being diagnosed among non-Hispanic Blacks, and 23.3% of the cases being diagnosed among Hispanics.

	Prevalent AIDS		Prevalent HIV		TOTAL CASES	
<u>'</u>	N	%	N	%	N	%
GENDER						
Male	225	86.5	53	68.8	278	82.5
Female	35	13.5	24	31.2	59	17.5
RACE/ETHNICITY						
Hispanic	42	16.2	13	16.9	55	16.3
Black Non-Hispanic	86	33.1	32	41.6	118	35.0
White Non-Hispanic	130	50.0	29	37.7	159	47.2
Unknown/Other	2	0.8	3	3.9	5	1.5
RISK BEHAVIOR						
MSM	132	50.8	25	32.5	157	46.6
IDU	34	13.1	6	7.8	40	11.9
MSM/IDU	23	8.8	2	2.6	25	7.4
HET SEX	42	16.2	12	15.6	54	16.0
NIR	21	8.1	32	41.6	53	15.7
OTHER	8	3.1			8	2.4
TOTAL CASES	260	100.0	77	100.0	337	100.0

Counties in Region 2:	Johnson Miami
2003 Estimated Population of Region 2	515,702
Prevalent HIV/AIDS Presumed Living in Region 2	244

Regional Information

Region 2 is also in the northeastern section of Kansas and includes two counties in the Kansas City Metropolitan area. Non-Hispanic Whites make up 87.9% of the population, non-Hispanic Blacks 3.5%, Hispanics 4.4%, Asians 3.8%, and less than 1% of the population is Native American. According to the U.S. Bureau for Economic Analysis, in 2002 Johnson County had the highest per capita personal income (\$43,237) in the Kansas and ranked above 95% of the nation for per capita personal income. Johnson County is also the most populous county in the state.

HIV Disease Diagnosed 2000-2003

There were 73 newly diagnosed HIV disease cases between 2000 and 2003 in Region 2, with an average rate of 4.7/100,000/year. The highest proportion of newly diagnosed cases between 2000 and 2003 was among non-Hispanic Whites (65.8%), followed by non-Hispanic Blacks (17.8%) and Hispanics (12.3%). Stratifying cases by mode of transmission reveals the highest number of cases diagnosed among MSM (49.3%) followed by those with no identified risk (26%), and risky heterosexual sex (12%). Sixty-six percent of the newly diagnosed HIV disease in Region 2 was diagnosed in persons aged 25-44. Among females newly diagnosed with HIV disease 47.1% (8) were non-Hispanic Blacks and 35.3% (6) were non-Hispanic Whites. Among newly diagnosed males the race/ethnicity proportions were similar to the overall disease distribution with 75% of the cases among males being diagnosed in non-Hispanic Whites. However, 12.5% of the newly diagnosed male HIV disease was among Hispanic males and only 8.9% was among non-Hispanic Blacks. Stratifications by race/ethnicity and gender in this region should be interpreted with caution considering the small number of newly diagnosed cases among minorities.

		Prevalent AIDS		Prevalent HIV		TOTAL CASES	
'	N	%	N	%	N	%	
GENDER							
Male	164	89.1	47	78.3	211	86.5	
Female	20	10.9	13	21.7	33	13.5	
RACE/ETHNICITY							
Hispanic	12	6.5	4	6.7	16	6.6	
Black Non-Hispanic	23	12.5	14	23.3	37	15.2	
White Non-Hispanic	144	78.3	39	65.0	183	75.0	
Unknown/Other	5	2.7	3	5.0	8	3.3	
RISK BEHAVIOR							
MSM	113	61.4	32	53.3	145	59.4	
IDU	9	4.9	2	3.3	11	4.5	
MSM/IDU	15	8.2	4	6.7	19	7.8	
HET SEX	23	12.5	6	10.0	29	11.9	
NIR	18	9.8	15	25.0	33	13.5	
OTHER	6	3.3	1	1.7	7	2.9	
TOTAL CASES	184	100.0	60	100.0	244	100.0	

Counties in Region 3:	Douglas Jefferson Franklin
2003 Estimated Population of Region 3	147,321
Prevalent HIV/AIDS Presumed Living in Region 3	52

Regional Information

Region 3 is the third region in the northeastern section of Kansas and is comprised of three counties. Douglas County includes the main campus of the University of Kansas and Haskell Indian Nations University. Non-Hispanic Whites account for 88.4% of the population, non-Hispanic Blacks 3.6%, Hispanics 3.2%, Asians 2.8%, and 2.1% of the population is Native American. Region 3 holds the largest proportion of Native Americans followed closely by Region 5; however, the largest population is in Region 8.

HIV Disease Diagnosed 2000-2003

There were 13 newly diagnosed HIV disease cases between 2000 and 2003 in Region 3, with an average rate of 2.9/100,000/year. Given the extremely small number of newly diagnosed HIV disease cases in Region 3 all further analysis should be interpreted cautiously. The highest proportion of newly diagnosed cases between 2000 and 2003 was among non-Hispanic Whites (76.9%), followed by non-Hispanic Blacks (15.4%) and there were no newly diagnosed cases among Hispanics. Stratifying cases by mode of transmission reveals the highest number of cases diagnosed among MSM (69.2%) followed by those with risky heterosexual behavior (15.3%). Sixty-nine percent of the newly diagnosed HIV disease in Region 3 was diagnosed in persons aged 25-44. Among females newly diagnosed with HIV disease all (2) were non-Hispanic Whites. Among newly diagnosed males the race/ethnicity proportions were similar to the overall disease distribution in this region with 72.7% of the cases among males being diagnosed in non-Hispanic Whites and 18.2% being diagnosed among non-Hispanic Blacks.

	Prevalent AIDS		Prevalent HIV		TOTAL CASES	
'	N	%	N	%	N	%
GENDER						
Male	37	84.1	6	75.0	43	82.7
Female	7	15.9	2	25.0	9	17.3
RACE/ETHNICITY						
Hispanic	1	2.3			1	1.9
Black Non-Hispanic	7	15.9	1	12.5	8	15.4
White Non-Hispanic	33	75.0	6	75.0	39	75.0
Unknown/Other	3	6.8	1	12.5	4	7.7
RISK BEHAVIOR						
MSM	29	65.9	5	62.5	34	65.4
IDU	3	6.8			3	5.8
MSM/IDU	3	6.8	1	12.5	4	7.7
HET SEX	6	13.6	2	25.0	8	15.4
NIR	1	2.3			1	1.9
OTHER	2	4.5			2	3.8
TOTAL CASES	44	100.0	8	100.0	52	100.0

Counties in Region 4:	Atchison Brown Coffey Doniphan	Jackson Lyon Morris Nemaha	Osage Shawnee Wabaunsee
2003 Estimated Population of Region 4	303,917		
Prevalent HIV/AIDS Presumed Living in Region 4	131		

Regional Information

Region 4 is in the northeast section of Kansas, and includes eleven counties as well as the capital city, Topeka. Non-Hispanic Whites account for 84% of the population, non-Hispanic Blacks 6.3%, Hispanics 7.3%, Asians 1%, and 1.4% of the population is Native American.

HIV Disease Diagnosed 2000-2003

There were 27 newly diagnosed HIV disease cases between 2000 and 2003 in Region 4, with an average rate of 3.0/100,000/year. The highest proportion of newly diagnosed cases between 2000 and 2003 was among non-Hispanic Whites (55.6%), followed by non-Hispanic Blacks (22.2%) and Hispanics (18.5%). Stratifying cases by mode of transmission reveals the highest number of cases diagnosed among MSM (59.3%) followed by those with no identified risk (18.5%), and risky heterosexual sex (14.8%). Sixty-three percent of the newly diagnosed HIV disease in Region 4 was diagnosed in persons aged 25-44. Analyses by race/ethnicity and gender in this region should be interpreted with caution considering the small number of newly diagnosed cases. Among newly diagnosed males 61.9% of the cases were among non-Hispanic Whites, 28.6% among non-Hispanic Blacks and 9.5% were diagnosed among Hispanics.

	Prevalent AIDS		Prevalent HIV		TOTAL CASES	
1	N	%	N	%	N	%
GENDER						
Male	89	87.3	23	79.3	112	85.5
Female	13	12.7	6	20.7	19	14.5
RACE/ETHNICITY						
Hispanic	8	7.8	3	10.3	11	8.4
Black Non-Hispanic	25	24.5	8	27.6	33	25.2
White Non-Hispanic	65	63.7	18	62.1	83	63.4
Unknown/Other	4	3.9			4	3.1
RISK BEHAVIOR						
MSM	58	56.9	13	44.8	71	54.2
IDU	11	10.8	4	13.8	15	11.5
MSM/IDU	8	7.8	4	13.8	12	9.2
HET SEX	17	16.7	2	6.9	19	14.5
NIR	6	5.9	5	17.2	11	8.4
OTHER	2	2.0	1	3.4	3	2.3
TOTAL CASES	102	100.0	29	100.0	131	100.0

Counties in Region 5:	Allen Anderson Bourbon	Crawford LabetteWilso Linn	Neosho n Woodson
	Cherokee	Montgomery	
2003 Estimated Population of Region 5	194,620		
Prevalent HIV/AIDS Presumed Living in Region 5	41		

Regional Information

Region 5 is in the southeastern section of Kansas and includes eleven counties. The region borders on both Oklahoma and Missouri. Non-Hispanic Whites account for 92.1% of the population, non-Hispanic Blacks 2.9%, Hispanics 2.3%, Native Americans 2%, and less than one percent of the population is Asian.

HIV Disease Diagnosed 2000-2003

There were 16 newly diagnosed HIV disease cases between 2000 and 2003 in Region 5, with an average rate of 2.7/100,000/year. Given the extremely small number of newly diagnosed HIV disease cases in Region 5 all further analysis should be interpreted cautiously. The highest proportion of newly diagnosed HIV cases between 2000 and 2003 was among non-Hispanic Whites (93.8%), followed by non-Hispanic Blacks (6.3%). Analyzing cases by mode of transmission reveals the highest number of cases diagnosed among MSM (43.8%) followed by injection drug users (18.8%). Seventy-five percent of the newly diagnosed HIV disease in Region 5 was diagnosed in persons aged 25-44. Among males newly diagnosed with HIV disease all 13 were diagnosed in non-Hispanic Whites.

	Prevalent AIDS		Prevalent HIV		TOTAL CASES	
1	N	%	N	%	N	%
GENDER						
Male	18	66.7	11	78.6	29	70.7
Female	9	33.3	3	21.4	12	29.3
RACE/ETHNICITY						
Hispanic			1	7.1	1	2.4
Black Non-Hispanic			1	7.1	1	2.4
White Non-Hispanic	26	96.3	12	85.7	38	92.7
Unknown/Other	1	3.7			1	2.4
RISK BEHAVIOR						
MSM	13	48.1	4	28.6	17	41.5
IDU	2	7.4	2	14.3	4	9.8
MSM/IDU	4	14.8	1	7.1	5	12.2
HET SEX	7	25.9	4	28.6	11	26.8
NIR		•	3	21.4	3	7.3
OTHER	1	3.7			1	2.4
TOTAL CASES	27	100.0	14	100.0	41	100.0

Counties in Region 6:	Clay Geary Marshall	Pottawatomie Riley Washington
2003 Estimated Population of Region 6	132,611	
Prevalent HIV/AIDS Presumed Living in Region 6	51	

Regional Information

Region 6 is in the north central section of Kansas. Six counties make up Region 6, which also includes a major military base and the main campus of Kansas State University. This region has the smallest population of the nine public health planning regions though it is not geographically the smallest region. Non-Hispanic Whites make up 84.3% of the population, non-Hispanic Blacks 7.9%, Hispanics 4.2%, Asians 2.8%, and less than one percent of the population is Native American.

HIV Disease Diagnosed 2000-2003

There were 21 newly diagnosed HIV disease cases between 2000 and 2003 in Region 6, with an average rate of 5.3/100,000/year. Given the extremely small number of newly diagnosed HIV disease cases in Region 6 all further analysis should be interpreted cautiously. This region has a higher proportion of females among prevalent HIV/AIDS cases than any other region. The highest proportion of newly diagnosed cases was among non-Hispanic Blacks (52.4%) followed closely by non-Hispanic Whites (42.9%) and then by Hispanics (4.8%). Stratifying cases by mode of transmission reveals an equal distribution between cases diagnosed among MSM (42.9%) and those with no identified risk (42.9%) followed by those who report risky heterosexual behavior (9.5%). Seventy-one percent of the newly diagnosed HIV disease in Region 6 was diagnosed in persons aged 25-44. Among males newly diagnosed with HIV disease the racial/ethic distribution mirrors that of the overall disease distribution in this region.

	Prevalent AIDS		Prevalent HIV		TOTAL CASES	
1	N	%	N	%	N	%
GENDER						
Male	20	62.5	12	63.2	32	62.7
Female	12	37.5	7	36.8	19	37.3
RACE/ETHNICITY						
Hispanic	1	3.1	3	15.8	4	7.8
Black Non-Hispanic	10	31.3	8	42.1	18	35.3
White Non-Hispanic	20	62.5	8	42.1	28	54.9
Unknown/Other	1	3.1			1	2.0
RISK BEHAVIOR						
MSM	15	46.9	5	26.3	20	39.2
IDU	5	15.6	2	10.5	7	13.7
MSM/IDU	2	6.3			2	3.9
HET SEX	8	25.0	3	15.8	11	21.6
NIR	1	3.1	8	42.1	9	17.6
OTHER	1	3.1	1	5.3	2	3.9
TOTAL CASES	32	100.0	19	100.0	51	100.0

TEGIOT /			
Counties in Region 7:	Barton	Lincoln	Republic
	Cheyenne	Logan	Rice
	Cloud	Marion	Rooks
	Decatur	McPherson	Russell
	Dickinson	Mitchell	Saline
	Ellis	Norton	Sheridan
	Ellsworth	Osborne	Sherman
	Gove	Ottawa	Smith
	Graham	Phillips	Thomas
	Jewell	Rawlins	Trego
	Wallace		
2003 Estimated Population of Region 7	293,455		
Prevalent HIV/AIDS Presumed Living in Region 7	68		

Regional Information

Region 7 includes 32 counties that occupy most of the northwestern quarter of Kansas. Thirteen of the counties in Region 7 are considered frontier counties, defined as an average population density of less than six persons per square mile. Consequently this is the largest region by geographic area. Non-Hispanic Whites account for 93.5% of the population (the largest percentages of Whites in the state), non-Hispanic Blacks 1.5%, Hispanics 3.9%, and less than one percent of the population is Asian or Native American.

HIV Disease Diagnosed 2000-2003

There were 29 newly diagnosed HIV disease cases between 2000 and 2003 in Region 7, with an average rate of 3.3/100,000/year. The highest proportion of newly diagnosed cases between 2000 and 2003 was among non-Hispanic Whites (65.5%), followed by non-Hispanic Blacks (17.2%) and Hispanics (10.3%). Stratifying cases by mode of transmission reveals the even distribution among MSM (31%) and injection drug users (31%) followed by those with no identified risk (17.2%). Sixty-nine percent of the newly diagnosed HIV disease in Region 7 was diagnosed in persons aged 25-44. Analyses by race/ethnicity and gender in this region should be interpreted with caution considering the small number of newly diagnosed cases. Among newly diagnosed males the racial/ethnic distribution of cases is similar to that of the overall disease distribution in this region with 68.2% of the cases being among non-Hispanic Whites, 18.2% among non-Hispanic Blacks and 9% were diagnosed among Hispanics.

	Prevalent AIDS		Prevalent HIV		TOTAL CASES	
1	N	%	N	%	N	%
GENDER						
Male	37	78.7	15	71.4	52	76.5
Female	10	21.3	6	28.6	16	23.5
RACE/ETHNICITY						
Hispanic	5	10.6	4	19.0	9	13.2
Black Non-Hispanic	7	14.9	4	19.0	11	16.2
White Non-Hispanic	32	68.1	12	57.1	44	64.7
Unknown/Other	3	6.4	1	4.8	4	5.9
RISK BEHAVIOR						
MSM	26	55.3	7	33.3	33	48.5
IDU	10	21.3	6	28.6	16	23.5
MSM/IDU	6	12.8	2	9.5	8	11.8
HET SEX	3	6.4	3	14.3	6	8.8
NIR	1	2.1	3	14.3	4	5.9
OTHER	1	2.1			1	1.5
TOTAL CASES	47	100.0	21	100.0	68	100.0

Counties in Region 8:	Barber	Elk	Pratt
_	Butler	Greenwood	Reno
	Chase	Harper	Sedgwick
	Chautauqua	Harvey	Stafford
	Cowley	Kingman	Sumner
2003 Estimated Population of Region 8	734,065		
Prevalent HIV/AIDS Presumed Living in Region 8	494		

Regional Information

Region 8 includes 15 counties in south central Kansas. The region includes one of the state's largest cities, Wichita, and is the most populous of all the regions. Non-Hispanic Whites account for 81.8% of the population, non-Hispanic Blacks 6.9%, Hispanics 7.4%, Asian 2.8%, and 1.1% of the population is Native American. This region contains the largest populations of Hispanics, Asians, and Native Americans in the state.

HIV Disease Diagnosed 2000-2003

There were 143 newly diagnosed HIV disease cases between 2000 and 2003 in Region 8, with an average rate of 6.5/100,000/year. These cases are relatively even in their distribution by race/ethnicity. The highest proportion of newly diagnosed cases between 2000 and 2003 was among non-Hispanic Whites (49.7%) followed by Hispanics (21%), and non-Hispanic Blacks (19.6%). Stratifying cases by mode of transmission reveals the highest number of cases diagnosed among MSM (47.6%), followed by those with no identified risk (16.1%), and closely followed by those with risky heterosexual behavior (13.3%). Seventy percent of the newly diagnosed HIV disease in Region 8 was diagnosed in persons aged 25-44. Among females newly diagnosed with HIV disease 42.3% (11) were non-Hispanic Blacks, 26.9% (7) were non-Hispanic Whites, and 23.1% (6) were Hispanic. Among newly diagnosed males the race/ethnicity proportions were similar to the overall disease distribution in this region with 54.7% of the cases among males being diagnosed in non-Hispanic Whites, 20.5% of the cases were diagnosed among Hispanics, and 14.5% were diagnosed among non-Hispanic Blacks.

	Prevalent AIDS		Prevalent HIV		TOTAL CASES	
	N	%	N	%	N	%
GENDER						
Male	323	85.7	97	82.9	420	85.0
Female	54	14.3	20	17.1	74	15.0
RACE/ETHNICITY						
Hispanic	41	10.9	19	16.2	60	12.1
Black Non-Hispanic	70	18.6	25	21.4	95	19.2
White Non-Hispanic	249	66.0	68	58.1	317	64.2
Unknown/Other	17	4.5	5	4.3	22	4.5
RISK BEHAVIOR						
MSM	231	61.3	62	53.0	293	59.3
IDU	34	9.0	13	11.1	47	9.5
MSM/IDU	38	10.1	12	10.3	50	10.1
HET SEX	48	12.7	15	12.8	63	12.8
NIR	18	4.8	12	10.3	30	6.1
OTHER	8	2.1	3	2.6	11	2.2
TOTAL CASES	377	100.0	117	100.0	494	100.0

Counties in Region 9:	Clark	Hamilton	Ness
	Comanche	Haskell	Pawnee
	Edwards	Hodgeman	Rush
	Finney	Kearny	Scott
	Ford	Kiowa	Seward
	Grant	Lane	Stanton
	Gray	Meade	Stevens
	Greeley	Morton	Wichita
2003 Estimated Population of Region 9	173,179		
Prevalent HIV/AIDS Presumed Living in Region 9	53	-	

Regional Information

Region 9 comprises much of the southwestern corner of Kansas and includes 24 counties, 15 of which are considered frontier counties and average less than 6 persons per square mile. Whites make up 65.5% of the population, Blacks 1.4%, Hispanics 31.1%, Asians 1.5%, and less than one percent of the population is Native American. Region 9 has the highest percentage of Hispanics in the state and the second largest Hispanic population. Region 8 has a much smaller percentage of Hispanics, but a slightly larger Hispanic population.

HIV Disease Diagnosed 2000-2003

There were 25 newly diagnosed HIV disease cases between 2000 and 2003 in Region 9, with an average rate of 4.8/100,000/year. The highest proportion of newly diagnosed cases between 2000 and 2003 was among Hispanics (76%) followed by non-Hispanic Whites (20%) and non-Hispanic Blacks (4%). Stratifying cases by mode of transmission reveals a relatively even distribution among all modes of transmission with the largest proportion being MSM (32%). Fifty-six percent of the newly diagnosed HIV disease in Region 9 was diagnosed in persons aged 25-44. Analyses by race/ethnicity and gender in this region should be interpreted with caution considering the small number of newly diagnosed cases. Among newly diagnosed males the racial/ethnic distribution of cases is similar to that of the overall disease distribution in this region with nearly all of the newly diagnosed cases both male and female being among Hispanics (76.5% and 75%, respectively).

	Prevalent AIDS		Prevalent HIV		TOTAL CASES	
1	N	%	N	%	N	%
GENDER						
Male	27	84.4	13	61.9	40	75.5
Female	5	15.6	8	38.1	13	24.5
RACE/ETHNICITY						
Hispanic	14	43.8	15	71.4	29	54.7
Black Non-Hispanic	1	3.1			1	1.9
White Non-Hispanic	17	53.1	6	28.6	23	43.4
Unknown/Other						
RISK BEHAVIOR						
MSM	17	53.1	5	23.8	22	41.5
IDU	5	15.6	8	38.1	13	24.5
MSM/IDU						
HET SEX	6	18.8	4	19.0	10	18.9
NIR	2	6.3	4	19.0	6	11.3
OTHER	2	6.3			2	3.8
TOTAL CASES	32	100.0	21	100.0	53	100.0

Question 3

What are the indicators of risk for HIV/AIDS infection in Kansas?

The persons most likely to become infected with HIV are those who engage in high-risk behaviors and who live in communities where HIV prevalence is highest. To help community planning groups understand the differing risks for HIV infection in Kansas, this section examines the trends and characteristics of populations that practice high-risk behaviors. The primary focus of this section is three high-risk populations: MSM, IDUs, and heterosexual adults.

The preceding section addressed the level of HIV infection in various groups affected by HIV. This section examines direct and indirect measures of risk behavior in the groups most at risk of acquiring HIV infection. Direct measures of risk provide information about risk behavior that is directly associated with HIV transmission. Indirect measures do not directly describe HIV risk behaviors; rather, they are indicators of possible HIV risk that may need further investigation. For example, an increase in STD or teen pregnancy rates does not directly indicate that HIV exposure is increasing, but may indicate an increase in unprotected sex.

HIGHLIGHTS

- Of the MSMs interviewed in 2001 HIV Testing Survey (HITS), 78.5% reported having had at least one casual (non-primary) sex partner during the previous 12 months (Figure 17).
- Forty-four percent of the men with at least one casual sex partner during the previous 12 months were unaware of the HIV status of their most recent partners (HITS).
- Among, MSM interviewees who reported having a casual sex partner, 87.2% reported having oral sex and 88.2% of those reported that the oral sex was unprotected.
- The majority of IDU HITS respondents reported never sharing needles (73.3%). However, the remaining 26.7% were divided between two groups: those who share needles less than half the time (24.4%) and those that share needles about half the time (2.3%).
- Among all 306 HITS respondents, 33.3% (102) reported injecting drugs at any time and the average age for the first drug injection experience was 21.
- Twenty-eight percent of female HITS respondents eligible for the heterosexual sex risk group reported having a casual sexual partner with whom they had oral sex the last time they had sex and 63% of those reported that the oral sex was unprotected.
- Condom usage during sex (excluding oral) with casual partners is more consistent among MSMs than heterosexuals regardless of gender.
- The gonorrhea incidence rate of 432 per 100,000 persons in Wyandotte is the highest gonorrhea incidence rate in the state. The overall state gonorrhea incidence rate was 96.5 per 100,000 persons.
- Teen pregnancy rates in 2003 among the leading racial/ethnic groups in Kansas range from 24.8 per 1,000 among non-Hispanic Whites to 51.8 per 1,000 among Hispanics.

MEN WHO HAVE SEX WITH MEN (MSM)

Direct Measures of Risk Behavior

For MSM, the following measures of risk behavior are available in Kansas from HITS to provide important information on factors that may affect the risk of acquiring or transmitting HIV infection:

- Number of sex partners
- Condom use or unprotected sex
- Substance use

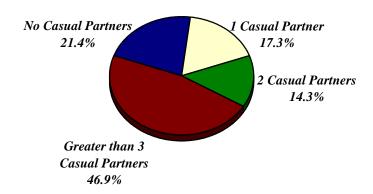
HITS (survey conducted by prevention outreach workers at gay bars) provides information on the risk behaviors of MSM. HITS is an anonymous, cross-sectional survey of populations at high risk for HIV infection, including MSM, which was conducted in two Kansas cities (Kansas City and Wichita) between July 2000 and February 2001. Participants, recruited from gay bars, had to be at least 18 years of age, able to give informed consent, and residents of Kansas. In addition, to be considered eligible for the MSM risk group, a man must have had sex with another man within the previous 12 months.

Multiple Sex Partners

According to HITS most of the men interviewed had 3 or more sex partners (61.2%) during the previous 12 months. Of the men interviewed in HITS, 78.5% reported having had at least one casual (non-primary) sex partner during the previous 12 months (Figure 17). In addition, 44% of the men with at least one casual sex partner during the previous 12 months were unaware of the HIV status of their most recent partners (HITS).

Figure 17. Sexual Partners Among Men Who Have Sex with Men

Kansas HIV Testing Survey, 2001 (N=98)

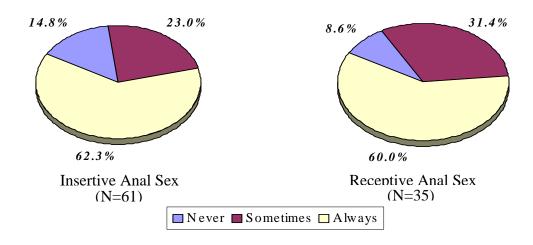


Condom Use or Unprotected Sex

Among interviewees who reported having a casual sex partner, 87.2% reported having oral sex and 88.2% of those reported that the oral sex was unprotected. Among those reporting anal or insertive sex in the previous 12 months with a casual partner, only 60% (21) reported always using a condom (Figure 18). Among those reporting their last sexual

contact with a casual partner to be receptive or insertive anal sex (85), reported condom usage was much higher (nearly 80% in both).

Figure 18. Condom Use Among MSM in Gay Bars Kansas HIV Testing Survey, 2001



Indirect Measures of Risk Behavior

Among MSM, STD surveillance may provide information about the potential occurrence of high-risk behavior. There may be an emerging difference in the way syphilis is being transmitted in Kansas. The trend indicates an increase in the proportion of cases reporting to be men who have sex with men (MSM). Due to the small number of cases no conclusions can be made at this point.

Table 10. Trends in Early Syphilis Diagnoses by Risk Group and Date of Diagnosis, Kansas, 2001-2004

Time Period	Men who have sex with men (MSM)	Heterosexual Sex	Heterosexual Sex/ Injection Drug Use	Total
Jan. 2001-June 2001	0	11	2	13
Jul. 2001-Dec. 2001	0	28	3	31
Jan. 2002-June 2002	1	16	2	19
Jul. 2002-Dec. 2002	0	18	2	20
Jan. 2003-June 2003	0	19	2	21
Jul. 2003-Dec. 2003	2	12	2	16
Jan. 2004-June 2004	4	14	1	19

Nationally, the problem of increasing ratios of MSM with early syphilis has been occurring since the late 1990's. In Seattle, Washington, "the proportion of cases in MSM increased from 21% (four of 19) in 1997 to 85% in 1998 and 1999." "After declining steadily for 10 years, the number of reported cases of primary and secondary (P&S) syphilis more than doubled in New York City from 117 in 2000 to 282 in 2001. The

¹ Centers for Disease Control and Prevention. *Primary and Secondary Syphilis*. MMWR 2003;52: 1117-1120.

increases occurred primarily among men who have sex with men. Of particular concern is the high proportion of syphilis cases among MSM who also have human immunodeficiency virus (HIV)." Similar trends are evident and have been documented in numerous urban areas across the United States. In Kansas, evidence of the same emerging problem may be occurring with an increasing proportion of early syphilis in MSM and one recently diagnosed case of early syphilis in an MSM that is also coinfected with HIV. However, the apparent increase might be an artifact of the small number of cases.

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² Centers for Disease Control and Prevention. *Primary and Secondary Syphilis Among Men Who Have Sex with Men.* MMWR 2002;51: 835-856.

INJECTION DRUG USERS (IDUS)

Direct Measures of Risk Behavior

Among IDUs the following measures of risk behavior are available in Kansas to provide important information on factors that may affect risk of acquiring or transmitting HIV infection:

- Injection drug use
- Sharing of needles
- Exchange of money or drugs for sex

HITS provides information on risk behavior related to substance use. Eligible IDUs were recruited from street locations. They had to be at least 18 years of age, able to give informed consent, and residents of Kansas. In addition, to be considered eligible for the IDU risk group, a person had to report injection drug use within the past 12 months.

Injection Drug Use/Sharing of Needles

Among all 306 HITS respondents, 33.3% (102) reported injecting drugs at any time and the average age for the first drug injection experience was 21. Those reporting IDU were also asked if their first drug injection experience was with a clean needle, to which 21.5% reported using an unclean needle. Eighty-four percent of those reporting ever injecting drugs also reported having injected drugs in the past 12 months (percentages exceed 100% because of multiple drugs of choice used). Cocaine was the drug most commonly injected by those who had injected in the previous 12 months (54%). Next among those drugs injected in the previous 12 months were heroin, (46.6%) followed closely by methamphetamines (43.7%), and heroin and cocaine (speedballs; 27.6%).

For the most recent injection drug use, 9.4% reported using a non-sterile needle. The majority of participants also reported never sharing needles (73.3%). However, the remaining 26.7% were divided between two groups: those who share needles less than half the time (24.4%) and those that share needles about half the time (2.3%).

Exchange of Money or Drugs for Sex

Survey respondents were asked a series of questions regarding payment for sex with money or drugs in the previous 12 months and 7.4% of those interviewed reported taking money or drugs for sex. Additionally, 8.1% of those interviewed reported giving money or drugs to someone for sex in the past 12 months.

Indirect Measures of Risk Behavior

Unfortunately at this time there is no substantial data to predict injection drug use in Kansas indirectly. There are behavioral risk studies underway at counseling and testing sites for use in future data presentations.

HETEROSEXUAL POPULATIONS

Direct Measures of Sexual Behavior

Among heterosexuals, the following measures of risk behavior are available in Kansas to provide important information on factors that may affect the risk of acquiring or transmitting HIV infection:

- Number of sex partners and frequency of condom use or unprotected sex
- Exchanging money or drugs for sex

HITS provides information on risk behavior related to substance use. Eligible heterosexual adults were recruited in STD clinics. Respondents had to be at least 18 years of age, able to give informed consent, and residents of Kansas. To be eligible for the heterosexual risk group, the person had to enter the clinic because of a suspected STD, not have been treated for an STD during the past 90 days, not have been at the clinic because of referral or follow-up, and not have had homosexual sex within the past 12 months.

The Behavioral Risk Factor Surveillance System (BRFSS) is a state-based random-digit-dialed telephone survey that monitors behavioral risks among the general adult population. Because BRFSS respondents were contacted by telephone, the data are not representative of households that do not have telephones or have cell phones only. In addition, BRFSS surveys the general noninstitutionalized adult population in Kansas, not just persons at highest risk for HIV/AIDS. This means that the extent of HIV behavioral risk information collected by the BRFSS questionnaire is limited and that inferences can only be made at the state level.

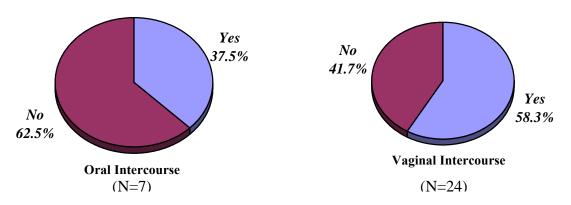
Number of Sex Partners and Frequency of Condom Use or Unprotected Sex

The 1999 BRFSS was the most recent survey to include data concerning the number of new sexual partners in the past 12 months. Among Kansans, 18-49 years of age BRFSS estimates indicate that 1.9% have had more than four partners in the previous 12 months.

Thirty-eight percent of female HITS respondents eligible for the heterosexual sex risk group reported having a casual partner in addition to their primary partner in the previous 12 months. Among these females with casual partners 72% reported having two or more casual partners in the previous 12 months. Additionally, only 28% of those females with one or more casual partners reported always using a condom during vaginal intercourse. This proportion only increases to 44% when combining those who always use a condom and those who use a condom more than half of the time. Therefore, among those female HITS respondents having vaginal sex with a casual partner 56% use a condom half the time or less than half the time. Twenty-eight percent of female HITS respondents eligible for the heterosexual sex risk group reported having a casual sexual partner with whom they had oral sex the last time they had sex. Sixty-three percent of those females who had oral sex did not use a condom (Figure 19).

Figure 19. Female Condom Usage During Last Sexual Encounter with a Casual Partner

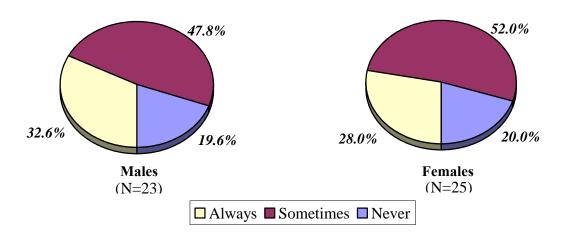
HIV Testing Survey, 2001



Over seventy percent of male HITS respondents eligible for the heterosexual sex risk group reported having a casual partner in addition to their primary partner in the previous 12 months. Among those males with casual partners 64.9% reported having two or more casual partners in the previous 12 months. Additionally, only 31.9% of those males with one or more casual partners reported always using a condom during vaginal intercourse. This proportion increases to 57.4% when combining those who always use a condom and those who use a condom more than half of the time. Therefore, among those male HITS respondents having vaginal sex with a casual partner 42.6% use a condom half the time or less than half the time. Among those male HITS respondents eligible for the heterosexual risk group who claim to have a casual sex partner, 88.4% reported having vaginal sex the last time they had sex and 39.3% of those reported that this encounter was unprotected.

Figure 20. Condom Use with Casual Sex Partners Among Heterosexuals at STD Clinics

Kansas HIV Testing Survey



Although male and female HITS respondents eligible for the heterosexual risk group are comparable by condom usage with casual partners, this is not true of heterosexuals and MSMs. Condom usage during sex (excluding oral) with casual partners is more consistent among MSMs than heterosexuals regardless of gender.

Indirect measures of Risk Behavior

STD surveillance provides information that may help to identify the potential occurrence of risky heterosexual behavior. Although increases in STD rates do not directly indicate that HIV exposure is increasing, these measures may indicate an increase in unprotected sex.

Gonorrhea

During 1999-2003, Kansas gonorrhea rates for males were consistently lower than those for females (Figure 21). Rates among males have shown a decline in the number of new cases diagnosed since 2000.

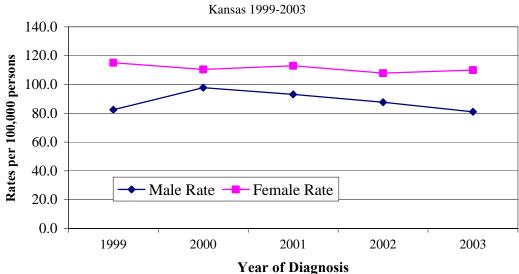


Figure 21. Trends in Gonorrhea Rates by Gender

In 2003, new cases of gonorrhea were diagnosed in 62% of the counties in the state. Four counties had more than 150 new cases diagnosed and two of those had more than 500 new cases (Sedgwick and Wyandotte). There were a total of 2,595 new cases of gonorrhea diagnosed in Kansas in 2003. The mean rate for Kansas in 2003 was 70.8 per 100,000 persons (calculated from 2003 population estimates of those 13-44 years of age for more accurate representation of the rate among those at risk). The gonorrhea incidence rate of 935.2 per 100,000 persons in Wyandotte is the highest gonorrhea incidence rate in the state. The overall state gonorrhea incidence rate among those most at risk (ages 13-44) was 208.7 per 100,000 persons.

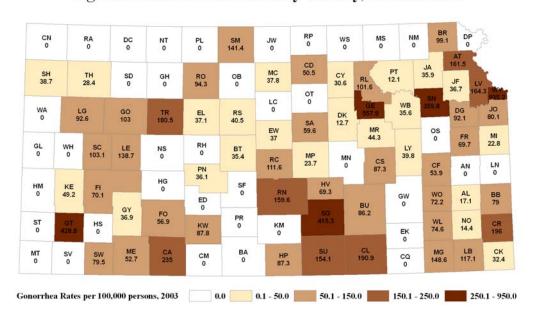


Figure 22. Gonorrhea Rates by County, Kansas 2003

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Information Systems, Geographic Data Services
Date of Publication: December 2004

Data Source
Kansas Cartographic Dataset
Kansas HIV/STD Surveillance Program

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Syphilis

During 1999-2003, the rates of primary and secondary syphilis were extremely variable. In Kansas state rates for syphilis are largely dependent on outbreak-associated cases. There have been several outbreaks in the previous five years that have lead to temporary rate spikes. From 2000-2002 the male rate has been higher than the female rate, however, in 2003 those ratios changed and the female rate was slightly higher than that of the males. Due to the small number of cases in Kansas per year it is difficult to do further analysis, however, it does appear that the overall trend for the previous five years has been an increasing rate of new diagnoses per year.

Kansas 1999-2003 1.4 Male Rate **Female Rate** 1.2 Rates per 100,000 1.0 ersons 0.8 0.6 0.4 0.2 0.0 1999 2000 2001 2002 2003 Year of Diagnosis

Figure 23. Trends in Syphilis Rates by Gender*

*Note: Scale not identical to scale used in Figure 21 due to the small number of syphilis cases.

In 2003, a total of 19 new cases of early syphilis (primary or secondary) were diagnosed in Kansas. New cases of early syphilis were reported in only five Kansas counties (Douglas, Johnson, Miami, Sedgwick, Wyandotte). The statewide rate was less than one case per 100,000 persons. Efforts to eradicate syphilis in Kansas and other states have been complicated by emerging unhealthy sexual behaviors such as: Internet acquired anonymous partners. Additionally, the emergence of co-infected HIV/syphilis patients has raised special public health concerns. Historically in Kansas syphilis has been nearly 100% within the heterosexual and IDU populations, but recent infections among MSMs may indicate a changing risk population that has been seen in many states across the country. However, due to the number of new syphilis cases diagnosed in Kansas this could also be an artifact of the small numbers.

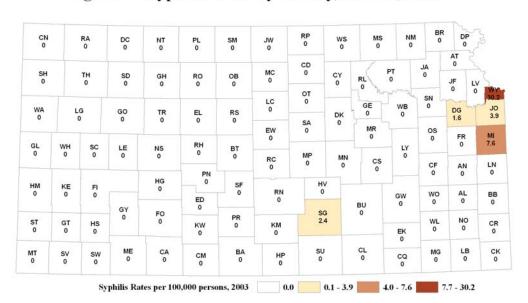


Figure 24. Syphilis Rates by County, Kansas, 2003

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Information Systems, Geographic Data Services
Date of Publication: December 2004

Data Source: Kansas Cartographic Dataset Kansas HIV/STD Surveillance Program Disclaimer: The purpose of this publication is to illustrate the status of the HIV/AIDS epidemic in the state of Kamans.

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Pregnancy Rates for Teenagers (10-19 years of age)

From 1999 to 2003, overall pregnancy rates for teenagers decreased 17.2% from 31.9 per 1,000 to 26.4 per 1,000. Teen pregnancy rates in 2003 among the leading racial/ethnic groups in Kansas range from 24.8 per 1,000 among non-Hispanic Whites to 51.8 per 1,000 among Hispanics. Between 1999 and 2003 Non-Hispanic Blacks had the greatest reduction in rate from 63.6 per 1,000 to 43.5 per 1,000. This 31.6% reduction moved non-Hispanic Blacks from the highest rate to the second highest rate among non-Hispanic Whites, non-Hispanic Blacks, and Hispanics. Over the time period of 1999 to 2003, the reduction of only 14.4% in the teen pregnancy rate among Hispanic teenagers repositioned this group as the racial/ethnic group with the highest teen pregnancy rate (51.8 per 1,000). The teen pregnancy rate among Hispanics is more than twice as high as the rate among non-Hispanic White teens.

SECTION 2 RYAN WHITE HIV/AIDS CARE ACT SPECIAL QUESTIONS AND CONSIDERATIONS

Question 1: What are the patterns of utilization of

HIV services for persons in Kansas?

Question 2: What are the number and characteristics

of persons who know they are HIVpositive but who are not receiving

primary care?



What are the patterns of utilization for HIV services of persons in Kansas?

This section focuses on information that pertains to HRSA HIV/AIDS care planning groups. Specifically, this section characterizes the patterns in the use of services by a number of populations in the state of Kansas. The sources of the information were HRSA-funded programs and supplemental studies conducted to examine specific aspects of HIV care in Kansas.

In 1990, Congress enacted the Ryan White CARE Act to provide funding for states, territories, and EMAs. The purpose of the funding was to offer primary care and support services for persons living with HIV disease who lack health insurance and financial resources for their care. Congress reauthorized the Ryan White CARE Act in 1996 and in 2000. These reauthorizations supported Titles I-IV, Special Projects of National Significance (SPNS), the HIV/AIDS Education Training Centers and the Dental Reimbursement Program, all of which are part of the CARE Act.

HIGHLIGHTS

- In 2003, a total of 928 clients received services funded through Ryan White Title II award in Kansas; of these, 209 were new clients.
- Most Kansas ADAP clients served during June 2003 were male (87%) and 25 years of age or older (98%). The racial/ethnic distribution of those served in June of 2003 was predominantly non-Hispanic Whites (70%). Of the remainder, 14% of the clients were Hispanics and 13% non-Hispanic Blacks.
- Nearly all (86%) of those served in June 2003 lived at or below 200% of the poverty level.
- Of the persons who had a positive result from a confidential HIV test during 1998-2002 and were reported to the state's HIV/AIDS Surveillance Program, 43.8% had an AIDS diagnosis within 3 months of their first positive HIV result.

The purpose of Title II funding is to improve the quality, availability, and organization of health care and support services for individuals and families with, or affected by, HIV disease in each state or territory. In addition, the funding provides access to needed pharmaceuticals through ADAP.

In 2003, a total of 928 clients received services funded through Ryan White Title II award in Kansas; of these, 209 were new clients. During 2003, the distribution of Title II CARE Act clients by race/ethnicity, sex, and age was similar to the distribution of these characteristics among persons known to be living with HIV/AIDS in Kansas at the end of 2003 (Table 11).

Table 11. Comparison of Demographic Characteristics of CARE Act Title II Clients and Persons Living with HIV/AIDS, Kansas, 2003

, and the second se	CARE Act clients, % (N=928)	Persons living with HIV/AIDS, % (N=1,471)
Race/Ethnicity		
White, non-Hispanic	65.2	62.1
Black, non-Hispanic	20.1	21.9
Hispanic	12.2	12.6
Asian/Pacific Islander	0.9	0.4
American Indian/ Alaskan Native	0.9	0.8
Multiple Races	0	1.8
Unknown	0	0.3
Gender		
Male	80	82.7
Female	20	17.3
Age (yrs.)		
≤13	1	0.7
13-24	4	8.8
25-44	65	74.3
≥45	30	16.2

Most of the visits of the 928 Kansas Title II clients involved case management (N= 928); followed by medical care (N= 476). In 2003, the average number of visits by Title II clients was highest for mental health/substance abuse services (53 visits/client) although only a few clients received these services. The average number of visits (among those utilizing Ryan White Title II services) to case management per client was the second largest with 48 visits/client in 2003. Title II clients who sought primary medical care made an average of 26 visits related to medical care during 2003.

Table 12. Utilization of Ryan White Title II Service, by Type of Service (N=928), Kansas, 2003

	Case Management	Medical	Dental	Mental Health/ Substance Abuse
Clients Receiving Service (#)	928	476	181	8
Visits per Client Utilizing Services (avg. #)	48	26	13	53

In addition to the services listed in Table 12, CARE Act funds were used to provide transportation services to clients (N=83) during 2003.

AIDS Drug Assistance Program (ADAP)

Since 1987, Congress has appropriated funds to assist states in providing antiretroviral therapy (ART), approved by the Federal Drug Administration (FDA), to AIDS patients. With the initial passage of the Ryan White CARE Act in 1990, the assistance programs for ART were incorporated into Title II and became commonly known as ADAP. ADAP now provides FDA-approved HIV-related prescription drugs to the underinsured and uninsured persons living with HIV/AIDS. For many people with HIV access to ADAP serves as a gateway to a broad array of health care and supportive services as well as other sources of coverage, including Medicaid, Medicare, and private insurance.

Since June 2001, persons enrolled in ADAP in Kansas have been able to receive antiretroviral medications. These medications include nucleoside analogues, protease inhibitors, and non-nucleosides. According to the National ADAP Monitoring Project Survey, 338 clients were served in Kansas during June 2003. Most Kansas ADAP clients served during this month were male (87%) and 25 years of age or older (98%). The racial/ethnic distribution of those served in June of 2003 was predominantly non-Hispanic Whites (70%), Hispanics (14%), and non-Hispanic Blacks (13%). Nearly all (86%) of those served in June 2003 lived at or below 200% of the poverty level (Table 13).

Table 13. Characteristics of Patients Enrolled in the AIDS Drug Assistance Program (N=987), Kansas, June 2003

	Patients, %	
Gender		
Male	87	
Female	13	
Race/Ethnicity		
White, non-Hispanic	70	
Black, non-Hispanic	13	
Hispanic	14	
Age (yrs.)		
<25	2	
25-44	66	
≥45	32	
Poverty Level (%)		
<100	56	
101-200	30	

Source: National ADAP Monitoring Project, Annual Report, April 2002.

HIV TESTING DELAYS

With the increased availability of antiretroviral medications, which have often been successful in treating HIV-infected persons, it is important that people be tested early for HIV. Those who are tested early in the course of their disease can benefit from advances in treatment and effective drug combinations. However, a significant number of people are not tested until they are already immunosuppressed or ill with an opportunistic infection.

Of the persons with a positive result from a confidential HIV test during 1998-2002, who were reported to the state's HIV/AIDS Surveillance Program, 43.8% were diagnosed with AIDS diagnosis within 3 months of their test. Table 14 shows the time between a person's first positive confidential test and AIDS diagnosis, by demographic and risk characteristics. These data should be interpreted cautiously, however, because a person may have been tested earlier, but anonymously.

The smallest proportion of "late testers" is among those with no identified risk factor. The data suggests that this group is most often diagnosed when the person is not ill. At this time we have no information to explain why this group without identified risk factors are tested for HIV.

Among persons who were tested confidentially during 1998-2002, men tested later in their disease process than women, and non-Hispanic Whites were tested later than Hispanics and non-Hispanic Blacks. Estimates of late testing and delayed access to care seem to be inconsistent with other surveillance data that indicate that the greatest declines in new AIDS cases and AIDS-related mortality have occurred among whites and men (see Figures 13 and 14).

Table 14. Proportions of Persons with AIDS Diagnosis, by Time Between First Positive HIV Test Result and AIDS Diagnosis (N=678), Kansas, 1998-2002

	AIDS Diagnosis, %		
	At time of 1st	≤3 Months	≤12 Months
	HIV + test		
	result		
Total	34.4	43.8	48.7
Gender			
Male	36.2	46.4	51.1
Female	26.2	32.5	38.1
Race/Ethnicity			
White, non-Hispanic	37.9	47.2	51.5
Black, non-Hispanic	26.8	36.9	44.3
Hispanic	31.3	42.0	44.6
Exposure Category			
MSM	35.7	46.7	51.4
IDU	32.2	40.2	49.4
MSM/IDU	41.7	46.7	51.7
Het Sex	34.6	48.6	52.3
Other	38.5	53.8	61.5
NIR	26.1	28.3	30.4
Age (yrs.)			
0-14	0.0	0.0	0.0
15-24	19.7	30.3	31.8
25-34	28.7	35.9	40.8
35-44	40.6	49.8	53.8
≥ 45	40.0	53.3	61.5
Public Health Region			
1	32.9	45.0	50.7
2	34.7	44.2	47.4
3	56.3	68.8	68.8
4	29.0	38.7	43.5
5	33.3	40.7	44.4
6	31.0	48.3	58.6
7	33.3	41.0	46.2
8	36.4	43.7	48.9
9	30.8	38.5	41.0

Question 2

What are the number and characteristics of persons who know they are HIV-positive but who are not receiving primary medical?

Efforts to measure unmet need among persons with HIV infection are underway in Kansas. The KDHE HIV/AIDS Surveillance Program is developing further methods for better identifying persons who know their status but who are not receiving primary medical care. The Surveillance Program has access to additional data sources that will be used in future estimates to further validate the measure of unmet need in Kansas.

HIGHLIGHTS

- Total unmet need: 668 persons (54.6%)
- Non-Hispanic Blacks have the highest proportion (47.2%) of cases not in care in 2003 when compared to the other major racial/ethnic groups (non-Hispanic Whites: 46% and Hispanics: 42.5%).
- There is high proportion of cases between the ages of 13 and 24 that are not in primary care (52.3%). This is difficult to interpret, but could again be due to a higher proportion of test results not in the reportable range.
- Primary medical care, including physician visits and lab tests, was rated as the most needed service: 84% of the Statewide Needs Assessment respondents reported a need for this type of care.
- Ninety-one percent (91%) of the Needs Assessment Survey respondents reported taking medications for their HIV/AIDS.

MEASURING UNMET NEED BY USING LABORATORY DATA

Kansas statutes require that laboratories report all test results indicative of HIV infection in persons residing in Kansas. The interpretation of results indicating HIV infection currently includes only detectable viral loads. A separate statute requires the reporting of any CD4⁺ T-lymphocyte count of less than 500 per microliter or a CD4⁺ T-lymphocyte percent of total lymphocytes less than 29.

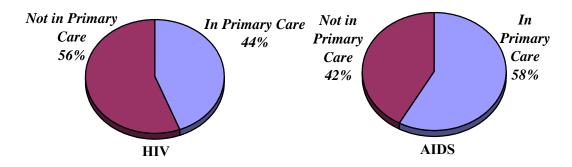
Once the test results have been reported to the HIV/AIDS Surveillance Program, the results can be linked to the records in the HIV/AIDS case registry, which includes the known population of persons living with HIV in Kansas. Consequently, for a specified time period, each HIV-infected person can be characterized as "in care" or "not in care" by the presence or the absence of a laboratory test result (e.g., CD4 cell count or measurement of viral load) during that period. This method assumes that laboratory reporting is complete and that all HIV-positive persons in care will have at least one test result that is reportable in Kansas. Reporting is complete only if all laboratories that perform HIV related tests in Kansas report their results to the HIV/AIDS Surveillance Program.

The Kansas HIV/AIDS Surveillance Program used the following components in the formula to calculate the unmet need in Kansas:

- Total number of Persons Living with AIDS (PLWA) CY 2003: 1,105
- Total number of Persons Living with HIV (PLWH) CY 2003: 366
- Total number of PLWA who received specified services in CY 2003: 641 (58%)
- Total number of PLWH who received specified services in CY 2003: 162 (44.3%)
- Unmet need among PLWA: (1,105 641) = 464 persons (42%)
- Unmet need among PLWH: (366 162) = 204 persons (55.7%)
- Total unmet need among PLWA + PLWH: 668 persons (54.6%)

Figure 25. Distribution of Unmet Need Among Prevalent HIV/AIDS

Cases by Diagnostic Category, Kansas



The difference between the proportion of individuals with unmet need among people living with AIDS and people living with HIV may be due to the number of HIV cases whose diagnoses are changed to AIDS when the laboratory results are reported. Additionally, some of this difference can be accounted for by the overall health differences associated with AIDS versus HIV. By definition the conversion to AIDS indicates a weakening of the immune system, which usually results in increased illness and increased need for medical care.

The characteristics of persons living with HIV disease in Kansas that are classified as persons "not in" primary care are presented in Table 15. The data reveals that there are a larger proportion of males not accessing primary care when compared to females. Non-Hispanic Blacks had the highest proportion (47.2%) of cases not in care in 2003 when compared to the other major racial/ethnic groups (non-Hispanic Whites: 46% and Hispanics: 42.5%). Comparisons across exposure categories are difficult due to the small number of cases in most groups; however, those who fall in the risk category classified as having "no identified risk" have the largest proportion of persons not in primary care.

Based on HIV to AIDS conversion comparisons between risk categories those with no identifiable risk factors are the least likely to convert within 12 months. This difference in time to conversion may indicate that the no risk factor group is healthier and therefore less likely to have a reportable CD4⁺ or viral load. The age distribution among those not in care is difficult to interpret because of the large proportion of cases among those 25-44 years old. However, there is high proportion of cases between the ages of 13 and 24 that are not in primary care (52.3%). This result could be due to a higher proportion of test results not in the reportable range.

Regional distribution of the unmet need is also difficult to interpret. While mortality statistics point to better opportunities for services and treatments in and around Kansas City (Regions 1 and 2) the unmet need statistics indicate that currently a smaller proportion of people are taking advantage of those opportunities. Alternatively, Wichita (Region 8), which has a disproportionately high mortality rate, has a higher proportion of cases currently in primary care. Additionally, these disproportionate effects could be a product of the previously mentioned limitations to estimates of unmet need, particularly in an area where interstate movement is common.

There are several limitations to this estimate in Kansas that should be considered when interpreting this data. First, only viral loads that are detectable are interpreted as reportable in Kansas. Therefore estimates of those without a viral load in the previous 12 months would likely exclude those individuals who are either early in the history of the disease or on HAART and consequently do not have detectable amounts of HIV virus in the blood sample. Secondly, statutes in Kansas require laboratory reporting of any CD4⁺ T-lymphocyte count of less than 500 per microliter or a CD4⁺ T-lymphocyte percent of total lymphocytes less than 29. This will again exclude those HIV-positive patients that are healthy and show no obvious signs of immunosuppresion at the time the test is drawn. Thirdly, the mobility of today's society and the surveillance program's limited ability to

monitor this movement among HIV positive individuals can cause patients to appear as though they are out of care when in reality they are no longer seeking care in Kansas.

Table 15. Characteristics of Persons with HIV Disease Classified as Not in Primary Care, Kansas, 2003

Not in Primary Care, Kansa	% Not in Primary Care (N = 668)	
Gender		
Male	46.0 (560)	
Female	42.5 (108)	
Race/Ethnicity		
White, non-Hispanic	46.0 (420)	
Black, non-Hispanic	47.2 (152)	
Hispanic	42.5 (79)	
Exposure Category		
MSM	43.3 (343)	
IDU	53.2 (83)	
MSM/IDU	41.6 (52)	
Het Sex	40.8 (86)	
Other	40.5 (15)	
NIR	59.3 (89)	
Age (yrs.)		
≤ 2	40.0 (2)	
2-12	20.0 (1)	
13-24	52.3 (68)	
25-44	46.2 (505)	
45-64	37.8 (88)	
≥ 65	80.0 (4)	
Public Health Region		
_ 1	52.5 (177)	
2	52.5 (128)	
3	42.3 (22)	
4	45.8 (60)	
5	48.8 (20)	
6	45.1 (23)	
7	41.2 (28)	
8	38.5 (190)	
9	37.7 (20)	

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RYAN WHITE STATEWIDE NEEDS ASSESSMENT SURVEY

A statewide needs assessment survey is conducted in Kansas every two years. The 2002 survey was distributed to 687 persons and returned completed by 270 persons for a 39% response rate. Information from the survey provided insight into whether persons were seeking medical care, how often, and where. Additional information was collected on persons' available income and health insurance to pay for these services and treatments. As well as, strengths and barriers encountered when they attempted to obtain medical care.

Service Needs/Availability

In the 2002 Statewide Needs Assessment, respondents were asked to report their need for 16 different services. Respondents indicated whether they needed the service, whether they used the service, where they would rank this service by importance (1= most important to 6= not important), and whether they lived within 30 minutes of this service. Additionally they were asked to rank 14 offered services in relation to each other by their relative importance. Primary medical care, including physician visits and lab tests, was rated as the most needed service: 84% of the respondents reported a need for this type of care. The relationship between the indicated need for this service and the use of this service is consistent as 85% of the respondents indicated they used this service. Additionally, nearly half of the respondents (49%) indicated that they visit their primary medical care physician four times per year.

In addition to primary care, the following services were rated as the most needed by respondents: case management (80%), dental care (80%), medication funding assistance (72%), and health insurance (65%). Rankings by reporting of importance to the respondent differ slightly from rankings by need. As previously mentioned 83% of respondents reported primary care services as important, additionally, medication funding assistance and health insurance were defined as important by 77% of respondents, followed by case management (69%) and dental care (68%).

Comparisons between the services respondents reported as a need and the services they reported using may indicate other barriers to the use of these services. The largest discrepancy between the indicated need for a service and the indicated use of a service is among dental care, where 80% of respondents indicated a need for this service and only 52% reported using this service. Some portion of the explanation for this discrepancy may be found in the subsequent question of the distance between this service and home for the respondent. Only 44% of respondents indicated that this service is offered within 30 minutes of where the respondent lives.

Antiretroviral Therapy (ART)

Ninety-one percent (91%) of the Needs Assessment Survey respondents reported taking medications for their HIV/AIDS. The remaining respondents were equally distributed between those who have never taken medications for their HIV/AIDS and those who have previously taken medications, but are not currently taking them. Nearly three-fourths of the respondents (74%) are taking protease inhibitors. Those who are not taking

protease inhibitors indicate that they have not been prescribed or do not currently need the class of drug as part of their treatment regimen. The respondents that reported taking combination therapy for treatment of their HIV/AIDS account for 80% of those who responded. Several reasons were indicated for those not currently taking combination therapy including negative side effects, the combination therapy is not currently needed, and their physician as a part of their therapy has not prescribed the combination therapy.

GLOSSARY

- **AIDS (acquired immunodeficiency syndrome):** An HIV-infected person receives a diagnosis of AIDS after the development of 1 of the CDC-defined AIDS indictor illnesses (see *opportunistic infection*) or on the basis of the results of specific blood tests (i.e., a CD4⁺ count of less than 200 cells/microliter or a CD4⁺ percentage of less than 14). A positive HIV test result does not mean that a person has AIDS.
- **antiretroviral therapy (ART):** Anti-HIV treatments designs ed to reduce the levels of HIV in a person's body.
- **bias:** Refers to results that do not represent true findings because of a systematic error in the data. For example, if persons feel uncomfortable reporting that they have engaged in high-risk behaviors, these behaviors will be systematically underreported. Consequently, conclusions about the occurrence of such behaviors would be considered biased.
- CDC: The Centers for Disease Control and Prevention, in the U.S. Department of Health and Human Services, is the lead federal agency for protecting the health and safety of the people of the United States. CDC accomplishes its mission through developing and applying disease prevention and control, environmental health, and health promotion and education activities designed to improve public health in the United States. The CDC provides most of the funding for HIV prevention and HIV surveillance activities in Kansas.
- **denominator:** Divisor; the term of a fraction, usually written under or after the line that indicates the number of equal parts into which the unit is divided; used to calculate a rate or ratio. For example, in the fraction ³/₄, four is the denominator.
- **epidemiology:** Study of how diseases or health conditions are distributed in a population. Consequently, an epidemiologist may analyze public health data to determine how a disease is transmitted and to recommend intervention, to identify segments of a population at risk of acquiring a disease, or to monitor disease trends and predict the course and effect of a disease.
- **exposure categories:** To monitor how HIV his being transmitted, HIV/AIDS cases are classified as one of several exposure (risk) categories developed by the CDC.
 - Male-male sexual contact refers to men who have sex with men (MSM); that is, homosexual or bisexual contact.
 - Injection drug use refers to the use of forms of drugs that require injection. Although it may be valuable to know that a person has used illicit drugs through other routes, this information would not be enough to classify a case as an exposure through injection drug use.
 - High-risk heterosexual contact refers to heterosexual contact with a partner who is at increased risk for HIV infection, i.e., a homosexual or bisexual man, an injection drug user, or a person with documented HIV infection.

- Hemophilia/transfusion/transplant cases are those resulting from a transfusion of blood or blood products before 1985.
- Perinatal HIV cases are cases of HIV infection in children resulting from transmission from an HIV-positive mother.
- Unspecified, or no identified risk (NIR), cases are those in persons who have no reported history of exposure at the time of the report date. This category includes persons for whom the surveillance protocols to document risk behavior information have not yet been completed, persons whose exposure history in incomplete because they have died, persons who have declined to disclose their risk behavior or who deny any risk behavior, and persons who do not know the HIV status or risk behaviors of their sex partners.
- **HAART** (highly active antiretroviral therapy): Aggressive anti-HIV treatments that usually include a combination of protease and reverse transcriptase inhibitors, which interrupt the HIV life cycle and whose purpose is to reduce a person's viral load to undetectable levels.
- **HIV** (human immunodeficiency virus): The virus that causes AIDS. A person who has contracted the virus is said to be HIV-positive or HIV infected.
- incidence: Refers to the number of new cases of a disease that occur in a population during a specified time, usually a year. Even though HIV data are often presented as "new cases of HIV", these data do not represent new infections (true HIV incidence) because a person may not be tested for HIV during the same period that he or she became infected. On the other hand, incidence can be calculated for diseases (e.g., some STDs). These diseases have clear symptoms that are detectable when a person becomes infected and that cause a person to be tested or to seek treatment shortly after infection.
- **numerator:** Dividend, the term of a fraction, usually written above or before the line that indicates the number of parts that are to be divided; used to calculate a rate or ration. For example, in the fraction ³/₄, three is the numerator.
- **opportunistic infection (OI):** HIV infection can weaken a person's immune system to the point that it has difficulty fighting off certain infections. These types of infections are known as opportunistic infections because they take the opportunity a weakened immune system gives to cause illness. Some examples of opportunistic infections are *Pneumocystis carinii* pneumonia (PCP) and Kaposi's sarcoma (KS). Opportunistic infections are CDC-defined AIDS indicator illnesses, which means that an HIV-infected person receives a diagnosis of AIDS after the development of one of them.
- **perinatal:** The word means "around birth" and is used to describe events that occur during labor and birth, and immediately after delivery. When used to describe HIV transmission, however, this work applies more broadly and describes any time that a mother may transmit HIV to her child-while she is pregnant, during birth, or through breast-feeding.

- **Prevalence:** Refers to the total number of persons with a specific disease or condition at a give time. HIV prevalence data are generally presented as "persons living with HIV". HIV prevalence data provided by HIV surveillance programs underestimate the true HIV prevalence because HIV-infected persons who have not yet been tested or reported to the health department are not included.
- **proportion (percentage):** A proportion is a type of ratio in which the numerator is included in the denominator. Because the numerator is a subset of the denominator, a proportion can be thought of as a ration of a part to the whole. A proportion is usually expressed as a percentage.
- **rate:** Type of ratio that includes a specification of time. In epidemiology, rates express the probability of, or risk for, disease or other events in a defined population during a specified period, often 1 year.
- ratio: The value obtained by dividing one quantity by another. For example, the fraction ³/₄ is a ratio and can be expressed verbally as "three divided by four". Both rates and proportions are specific examples of ratios.
- **reporting delay:** The time lag between the diagnosis of a new case of HIV or AIDS and the report to the health department. Currently in Kansas, 75% of HIV cases and 80% of AIDS cases are reported to the HIV/AIDS Surveillance Program within 9 months of diagnosis. Because of reporting delays, surveillance estimates of cases diagnosed in recent periods underestimate the actual number of cases diagnosed in those periods.
- **Ryan White CARE Act:** The Ryan White Comprehensive AIDS Resources Emergency Act was created to provide federal assistance to increase the availability of primary health care and support services for persons living with HIV disease, to increase access to care for underserved populations, and to improve the quality of life of those affected by HIV infection. The CARE Act was first enacted by Congress in 1990 and was reauthorized in 1996 and 2000.

HRSA implements the CARE Act and directs assistance through the following channels:

- Title I provides support to eligible metropolitan areas (EMAs) with the largest number of reported AIDS cases, to meet emergency service needs of persons living with HIV.
- Title II provides support to all states and territories to improve the quality, availability, and organization of health care and support services for persons living with HIV and their families.
- Title III supports early-intervention outpatient HIV services through funding to public and private nonprofit entities.
- Title IV funds public and private nonprofit entities to conduct projects to coordinate services to children, youth, women, and families with HIV/AIDS.
- Part F provides support for Special Project of National Significance (SPNS) to develop and evaluate innovative models of HIV/AIDS care, for AIDS Education and Training Centers (AETCs) to conduct education and training for health care

providers, and for the HIV/AIDS Dental Reimbursement Program to assist with providing oral health services to HIV-infected patients.

surveillance: In a public health context, refers to the intentional collection of data on diseases or other important health conditions in order to monitor where the condition occurs and to determine the risk factors associated with the condition.

testing (anonymous, confidential): In Kansas, a person can choose to be tested anonymously or confidentially for HIV infection. Positive results of anonymous and confidential HIV tests are reported to the health department, where the information is maintained under the strictest security and confidentiality measures. Persons who are tested anonymously do not provide their names when they are tested. Persons who are tested confidentially do provide their names when they are tested.

ABBREVIATIONS

ADAP AIDS Drug Assistance Program

ART antiretroviral therapy

BRFSS Behavioral Risk Factor Surveillance System

CADR CARE Act Data Report

CBO community-based organization

CDC Centers for Disease Control and Prevention

CTS Counseling and Testing System

CY calendar year

HAART highly active antiretroviral therapy

HARS HIVAIDS Reporting System

HITS HIV Testing Survey

HOPWA Housing Opportunities for People with AIDS

HRSA Health Resources and Services Administration

IDU injection drug user

MAC Mycobacterium avium complex

MOS MSM Outreach Survey

MSA metropolitan statistical area

MSM men who have sex with men

NHSDA National Household Survey of Drug Abuse

OMB 15 Office of Management and Budget Directive 15

PLWA Persons living with AIDS

PLWH Persons living with HIV

PCP Pneumocystis carinii pneumonia

SAMHSA Substance Abuse and Mental Health Services Administration

STD sexually transmitted disease

TB tuberculosis

ZDV zidovudine